Volume 2 Number 8 January 1987
$2.95
Cheap

Exploring the

EPSON WORLD

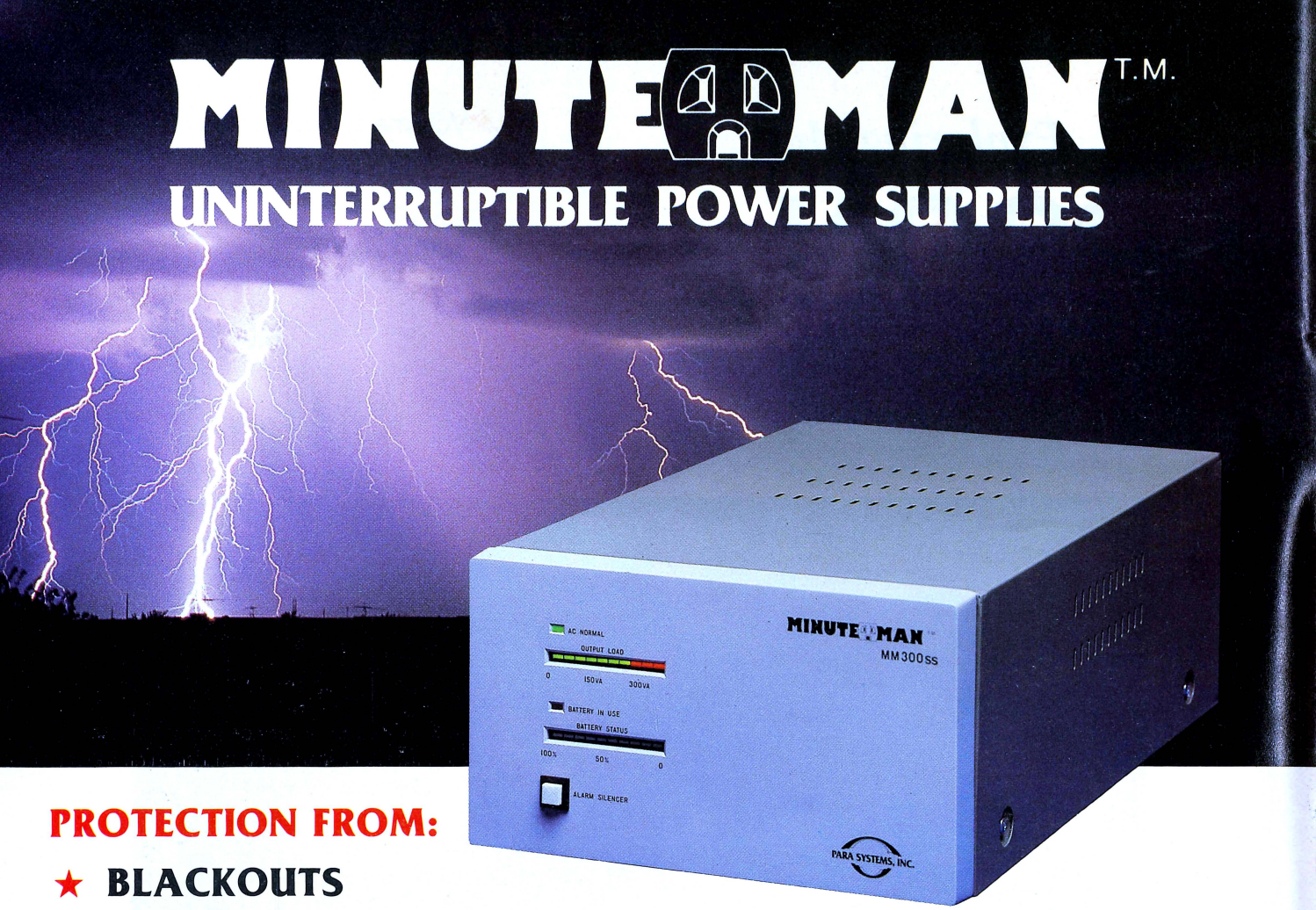
In this issue:

All About PC Pursuit
Start a Family Newsletter
Maintaining Your QX Computer
Valdocs Vs. Ability

And several other things of interest...

MINUTEMAN™

UNINTERRUPTIBLE POWER SUPPLIES



PROTECTION FROM:

- ★ BLACKOUTS
- ★ BROWNOUTS
- ★ INTERRUPTIONS
- ★ SPIKES
- ★ SURGES
- ★ EMI/RFI

EVALUATION PROGRAM

(30-DAY MONEY BACK GUARANTEE)

- Completely automatic operation
- From 1 msec to 4 msec switching time
- Audible and visual status indicators
- Order - ship same day
- Toll Free ordering
- Full one year warranty

MINUTEMAN 250	MINUTEMAN 300	MINUTEMAN 500	MINUTEMAN 1000
250 WATT (120V) STEPPED SQUAREWAVE	300 WATT (120V) SYNCHRONIZED SINEWAVE	500 WATT (120V) SYNC. STEPPED SQUAREWAVE	1000 WATT (120V) SYNCHRONIZED SINEWAVE
$359.00 Suggested Retail	$549.00 Suggested Retail	$699.00 Suggested Retail	$1399.00 Suggested Retail

Free! **Epson World subscription or one year extension with each purchase.**

Jalco Distributing
RFD #2 Box 539
Epping, NH 03042
(603) 679-2445

PARA SYSTEMS, INC.

1-800-238-7272

CP/M - Valdocs Disk of The Month

Eight great goodies to make computing worthwhile once again! The disk is practically full, so use care in handling or you may spill some of the bits! (Just kidding, folks.)

PC-FILE.LBR (CP/M and TPM-III) A database manager. This is the CP/M version of Jim Button's powerful yet easy to use PC-FILE Database Manager. Includes SORT, MERGE, and EXPORT utilities.

MAKBATCH.LBR (Best in CP/M) CP/M Utility. Easy to use "batch" processor that creates a .COM file that automatically executes your commands "like magic".

PHONE3.LBR (CP/M and TPM-III) Organizing Utility. A fast "Electronic Black Book" keeps track of names and phone numbers stored inside the program itself.

SNOOPY87.CAL (Text File) 1987 Snoopy Calendar. This full size wall calendar, printed by your word processor, features your favorite Beagle and a special message!

CLUE.COM CLUE.COM (CP/M and TPM-III) Entertainment. Did the Butler do it? Find out as you become a supersleuth and tackle this mystery game.

QXRCPM04.LST (Text File) Epson BBS List. The latest listing of Epson-related bulletin boards in North America.

HAIKU.COM (CP/M and TPM-III) Entertainment. Random Haiku poetry generator that produces startling results.

QXTMPLAT.LBR (Best in CP/M) Productivity Tool. Create and print keyboard templates for your HASCII keyboard. Uses BRADFORD.LBR (EW Sept CP/M DOM) to make custom templates of commercial quality!

MS-DOS Disk of The Month

Thirteen files of unprecedented utility for the MS-DOS-erist are loaded on this disk. Completely compatible with the Official EW Clone, Epson Equity and other computers of the PC-compatible ilk. Most of these programs (if not all) will work on QX-16 and QX-10/Titan machines. At our amazingly low price of $15, there is absolutely no possible way in this physical universe you can go wrong.

BOMBSQAD.ARC Inspects files for ASCII text or strings. Useful to identify unknown programs, find command sequences, check for hidden messages.

CAMERA.ARC Take a snapshot of your screen and save it in a file for later recall. This resident program is activated whenever you press both the ALT and PrtSc keys together.

BURNOUT.ARC Blanks your CRT after no keyboard activity for a preset period of time. You set the time limit. Bring back the screen at the touch of any key.

CDIR.ARC Automatically maintains file discriptions up to 65 characters long for any file on your system. Helps you remember what each file is after a mental lapse.

CED.ARC A simple command editor to replace EDLIN, supplied with DOS. Written for the (ugh) IBM PC/XT/AT systems, it works with all true compatibles. Since it uses no hardware-specific functions, it will most likely work on any MS-DOS system as well.

CHKFILE.ARC Performs safety checks on unknown programs. Helps spot "WORMS" to prevent data destruction in your system.

CLIP.ARC Is a DATA ENTRY SCREEN GENERATOR which will write the screen code for DBASEIII or CLIPPER. Function keys are used and most of the commands are self explanatory. Design your screen here, and CLIP will write the code for you. A real time saver.

CPU.COM Quickly checks the execution speed and tests the system CPU. Find out quickly whats going on inside your computer.

DBLDIR.ARC Displays two directories side by side so you can easily compare them. Lots of options, this one program alone is worth a ton of money when you need it.

DEFRAG.ARC Repacks your disks to restore the fastest possible access throughout a file. This program requires BASICA or GWBASIC.

COMMANDO ARC Is a file manager similar to 1DIR and XTREE. A major program, it competes with commercial variations costing lots of bucks. Works with both floppies and hard disks.

DIRUTIL.ARC is a collection of 17 directory utilities that will handle your directories just about any way imaginable. Too many to describe here, you'll have to explore this one on your own.

Epson World Disk of the Month

Box 369-New Boston, NH-03070

YES! Without a moment's delay, kindly send me copies of the January '87 Epson World Disks of the Month as indicated below at $15 each!

_____EW-8M (MS-DOS) _____ EW-8C (CPM-VALDOCS)

Check Enclosed _____ MC_____ Visa _____

Card Number:_____

Expiration Date: _____

Signature:_____

Name:_____

Address:_____

City_____ State____ Zip:_____

Epson World Disks of the Month sometimes contain public domain, freeware and shareware software. Your payment covers media, packaging, and production overhead, postage and handling.

Epson World

January 1987 Volume 2 Number 8

Articles

Finding the Remote "Help" Button ____ 4
Or, help make Ma Bell and her children rich.

Valdocs Vs. Ability ____ 11
Is it possible that something could replace Valdocs?

Start a Family Newsletter! ____ 10
Done properly, your family will grow stronger.

Using the Bradford Utilities with Valdocs Files ____ 17
Yes, more fonts for Valdocs.

Expanding HX-20 Capability with an External Printer ____ 18
Hang a bigger printer on your portable.

The Battery Problem in Epson Computers ____ 24
An electrifying situation.

Maintaining Your QX 10/16 ____ 26
Get the cobwebs out of your system.

Departments

The Valdocs Chronicles ____ 9
Converting your V1 files is no fun.

Write, Edit, Publish! ____ 11
How to get the most out of interviews.

The Mail Bag ____ 15
Our readers tell it the way it is.

The Language Lab ____ 21
How to make your programs friendly.

Immortal Caption Contest ____ 16
Our first Winner!

Disk of the Month ____ 1
We found a couple more programs for you.

Finnegan's Flea Market ____ 32
Classified advertising at its best.

After Hours

Meet some Dead Horses ____ 33
If you have what it takes, you can become a Dead Horse!

Advertisers Index ____ 3

From the Publisher ____ 30

Editor
J. M. Hansen
Associate Editors
L. J. Brown
John Whiting
Consulting Editor
Stan Miastkowski
Contributing Editors
Robin Perry
Paul Zonka
Advertising Sales Director
Joe Lore
Circulation - Business Manager
Pat Hansen
Business Services
Susan Hansen
Editorial and Business Offices
PO Box 369
New Boston, NH 03070
(603) 487-2500 (voice)
(603) 487-2501 (BBS)

Epson World is published monthly by PJ Industries, Inc., PO Box 369, New Boston, NH 03070. Application for second class rates WAS pending at New Boston and additional mailing offices, but the post office seems to have lost it. Postmaster: Address changes to EPSON WORLD, PO Box 369, New Boston, NH 03070. Copyright 1986 by PJ Industries, Inc. All rights reserved, but we are generous when dealing with Epson user groups and users.

EPSON WORLD is an independent publication of PJ Industries, Inc. and is not affiliated in any way with Epson America, Inc. Epson, HX-20, Geneva, PX- 8, QX-10, QX-16, and Equity are trademarks of Epson Corporation.

Advertisers Index

Support our loyal advertisers!

Company	Page
A1 Computers, Inc.	8
AAA Liquidators	3
Computer Connection	29
Disk of the Month	1
Dresselhaus	31
Electrified Discounters	23
Epson America	CIV
Green Tree	6
Green Tree	25
International Trading Corp.	36
Jalco	CII
James River Group, Inc.	14
MPS, Inc.	19
Nickelodeon Software	31
PC Computer Brokers	13
PJ Industries	34
P.R.O. Systems	30
SemiDisk Systems	CIII
Star Technology Corp.	35

Cover Story

Wrapped in an ice chrysalises, Canterbury Shaker Village awaits the end of Winter's cold grip and rebirth when Spring returns.

CP/M and Valdocs users share much the same wintery prospect, except no Spring will ever come for them. Gone forever are days of glory when exciting new software and hardware products for their computers were announced on a nearly daily basis.

The computing world spawned, exploited then abandoned millions of these computing systems and now looks at them as relics, museum pieces. Despite the obvious sizable installed user base, virtually no commercial software is being written for these venerable machines.

Owners of CP/M systems don't deny this passage, and often look with envy at the MS-DOS world. Then continue to use their old reliable systems as always.

Flat Rate

Unrestricted Long Distance Telephone Dialing!

- **TWO SERVICES AVAILABLE AT $120 per month or less!**
- **Easy to start, cancel anytime!**
- **High quality telephone service 24 hours per day!**
- **No strings, hooks or tricks; EW is using this service daily.**
- **Call or write for information and free demonstration!**

Epson World Magazine
PO Box 369 New Boston, NH 03070
603-487-2500

EPSON & COMREX PRODUCTS
NOW AT
AFFORDABLE PRICES!
(Too Low To Publish)
NEW AND DEMO UNITS

Partial List

QX-10 + Hascii Enhanced Software
QX-16 Most Epson Printers
HX-20 + Software + Accessories
PX-8 + Accessories + Plus Software

Most Comrex Printers
✓ ✓ Monitors CR 103 Modem

Titan QX-PC2/192-256•512K

AAA LIQUIDATORS
8417 La Palma Ave., Suite 196
Buena Park, Calif. 90620
(714) 994-6472
Mon. - Fri. 8:30 - 5:00 Pacific Time

Finding the Remote "Help" Button

Remote Bulletin Board Systems (RBBS) are an important alternative source to non-existent manufacturer and dealer support. PC Pursuit (PCP) makes the telephone bills affordable.

By Greg Stevenson

In the past, when you needed help with your QX series computer, you could call Rising Star, Epson, or your local dealer. They could ask questions such as: "How do I get my new FRUITCAKE II printer to work with Valdocs?", "Will it hurt to leave my computer on all the time?", or "If that home finance program will pay for itself in no time, can I wait until it does and then take it home?".

Over the last year things have radically changed. Rising Star has fallen on hard times and no longer has customer support. Epson and most dealers will no longer talk about the QX series; instead, they want to sell you a clone of the IBM PC. Thus, QX users must find other ways to ask questions and get them answered in a timely fashion.

Aside from Epson World and user group newsletters, about the only other alternative for most people is to use one of the Bulletin Board Systems (BBS) that support the QX. There you can find free, often expert advice in response to your questions, free software that runs on QX computers, the latest news on what is happening in the QX community, and much, much more. It is sort of like having a remote "HELP" key.

It is an unfortunate fact, however, that most of these BBSs are a long distance call away. So, while the advice and/or software may be free, phone bills can make this method of support very expensive. Fortunately, there is a service from U.S. Telenet called PC Pursuit (PCP) which makes calling a long distance BBS affordable.
PCP becomes even more attractive when you realize that remote help is not limited to just your computer system. BBS systems specialize in virtually every topic from agriculture to the zodiac. About 5,000 are now spread across the nation serving nearly every profession, hobby, sport, etc. Since it is a common practice of most boards to list the numbers of other BBS systems, it doesn't take long to find 5 to 10 BBSs that will be of interest.

Another BBS bonus is comradeship. It's always nice to talk to (or type to) someone with similar interests. A BBS becomes sort of an electronic water cooler where no one can readily classify you based on your age, sex, race, appearance, or other externals. Other BBS participants are rarely as you picture them in your mind, semi-anonymity that lends a certain excitement to electronic communication.

Free public domain software is another big BBS attraction. Megabytes and megabytes of programs and documents are available. Many (if not by actual count, most) are so-so, others are real gems, even better than their commercial counterparts. You can also often find demo versions of commercial software. For example, the Independent Programmers Guild, which markets software for QX computers, has demos for virtually all its programs.

QX Related Boards Accessible via PC Pursuit

Star Tech (213) 694-8909 Run by David Unfried. Possibly the most active BBS for QX/Epson/RSI topics.

Jim's Valdocs Support QBBS (213) 543-1298 Run by Jim Jeter, former customer service manager.

EPSTAR (213) 398-2395 Official board of the LA Epson Users Group and Magic Cursor club. Solid information and "interesting" regulars.

Manna Technologies Board (213) 633-6343 Primary emphasis is on telecommunications, PC Pursuit, and M.Y. Mailbox.

Washington Zephyr (201) 620-5418 Sysop is Miles Hoover, president of ECCO. Good technical information, clearing house for the Independent Programers Guild.

Philadelphia TBBS (215) 76-EPSON or (215) 763-7766 Run by Philadelphia Area Epson Users Group. Has QX and PX related sub-boards, gossip.

The PX DOCK (313) 538-6968 Run by Bob Herman, this board is considered the one stop shop for anything related to the PX-8/Geneva computer.

These can be found on several of the QX related boards. Useful documents can also be found, such as "Mrs. Fields' Cookie Recipe" *(Ed note: If anyone actually has this recipe in hand, I'd appreciate a copy.)* or "How to LOSE at the Lottery!" Apparently this latter document has been read by millions of Americans.

Calling several BBSs on a regular basis can be very beneficial to getting the most out of your QX (or any) computer, your profession, your other interests, and it can just be a lot of fun. But the phone bills generated by this activity can be a real downer at the end of the month.

PC Pursuit to the Rescue

The cost of PC Pursuit is only $25 a month for such calls. Though there are some restrictions, they do not make much impact upon the hobbyist using this service. You can make 1, 5, 50, or even over 100 hours of long distance calls each week and still pay no more than $25 per month. If your New Year's resolution was to give up smoking, it can be a great way to finance a new and more beneficial habit.

Sign up for PC Pursuit by calling a Telenet representative at 1 (800) TELENET (835-3638) between 8 a.m. to 5 p.m. Monday through Friday (Eastern time), or call their "In Pursuit Of..." BBS anytime at 1 (800) 835-3001. The cost is a one-time $25 registration fee and $25 per month for an unlimited number of connections on weeknights from 6 p.m to 7 a.m. (local time) plus all day on weekends and 5 major holidays. You can also use the service during business hours at about half the cost of standard long distance. PCP charges are billed directly to your Master Charge or VISA card, currently the only billing method offered.

In about two weeks you should receive a user's packet that contains your PC Pursuit ID and password. You need these to call via PC Pursuit. There is also an instruction booklet and a book of local access numbers you can dial.

There are a Couple Rubs

You probably think there is a catch, that this is to good to be true. Well, there are some limitations and differences between dialing direct and dialing via PC Pursuit. They have little actual impact on calling BBS systems, but they are important to know about before plunking down your money.

When you dial long distance, the telephone network automatically sets up a "single user" dedicated connection between you and your destination. You can either talk over this "network" or use a modem to move data.

PCP works differently. A data communications network is already in place, continuously connecting all the cities on the network together. Each of these cities could be considered a "node" where users connect to the system. Nationwide, nearly 18,000 cities can dial into a node using a local phone call, so geting into the PCP network is easy and cheap for most of us.

Once you're on the network you simply provide the area code (city) you wish to call, and the network connects you to a modem in that target area. All that's left is for you to make a local call to the BBS you are after.

Here are the differences and/or restrictions with PC Pursuit dialing:

1) It can only be used for telecommunicating with modems. Voice calls are not possible.

2) Only 300 and 1200 baud are currently supported. 2400 baud is expected soon, hopefully by March 1987.

3) PC Pursuit has "anti-phone-hog" features. Unlike MA Bell, (who is happy to charge you for every second you're connected.) PCP won't let you connect to a board and remain connected all night, and most BBS systems won't either. If there's no activity, PCP hangs up on you after a few minutes. (The same happens when you've been connected for more than an hour or after connecting to your fourth city in a row. (When it happens, don't worry, just call right back in for 4 more cities and another hour.)

4) You can't call everywhere, but you can reach about 80% of all BBSs in the U.S. Although PCP is accessible from all over, the out-dialing modems are located in only about 25 metropolitan cities. This limits you to about 5 to 10 QX related boards and about 4,000 other boards. PCP's goal is to expand to 100 areas by the end of the year.

5) There are three steps to dial a BBS using PC Pursuit. If you have a QX, "script files" are available to automate PC Pursuit dialing using Valdocs + Mail or MEX to a limited degree. These files will take care of most of the initial dialing in PC Pursuit but can "hang" if the target city and/or the BBS is busy.

For the most part, one needs to watch the computer to make sure everything is progressing normally. By far, the easiest way of using PC Pursuit is to use M.Y. Mailbox, a new program by Manna Technologies. This is the first and only modem program written to work within the context of PC Pursuit

Cities Served by PC Pursuit

*Cities (area codes) with * were not served by PCP when this article was written but should be on line by the time it reaches you.*

Atlanta	404	Los Angeles	213	*Portland	503
Boston	617	*Miami	305	*Research Park	919
*Cleveland	801	*Milwaukee	414	*Salt Lake City	801
Chicago	312	*Minneapolis	612	San Francisco	415
Dallas	214	Newark	201	*San Jose	408
Denver	303	New York	212	Seattle	206
Detroit	313	Philadelphia	215	*Tampa	813
*Glendale	818	*Phoenix	602	Washington D.C.	202
Houston	713				

as well as conventional dialing. In fact, M.Y. Mailbox makes using PC Pursuit as simple to use as standard dialing is on good modem programs. It even supports rotation dialing of a list of numbers, so that if one BBS or target city is busy it will try the next in the list.

6) PCP is slower and "jerkier" than dialing direct. This is because the Telenet system is designed to move large volumes of data efficiently, rather than individual keystrokes. When sending characters, PC Pursuit tries to save up 128 characters and send them all in a "packet" to the destination modem.

The advantage of packet transmission is that larger volumes of data can be moved error free over a single data line using special techniques to eliminate noise that haunts many long distance calls.

To prevent people from having to type 128 characters just to see a response, Telenet forwards a smaller packet if another character is not received within a second or two, or whenever a CR is received.

This makes typing appear jerky and can also slow file transfers considerably. After a few nights most people adjust to the jerky typing. Speed of transfer is annoying but much better than the alternative of paying by the minute.

7) PC Pursuit is expanding faster than Telenet anticipated. One result is that popular cities often have all their modems in use, and you get a busy message.

Telenet is currently expanding both the number of area codes reachable and the number of out-dialing modems at each city to relieve the pressure somewhat. Still, without M.Y. Mailbox or some other way of automating the dialing process, this can be a real source of frustration.

(Ed note: if this weren't bad enough, you may get through PCP only to find your BBS already in use, so you have two chances for a busy on every call, once you're on the network.)

Is PC Pursuit for You?

If you spend more than $25 a month in long distance phone bills to BBS systems in PC Pursuit areas, and the PC Pursuit access number is a local call for you, the answer is usually yes. Or if the access number is local, and $25 is reasonable, PCP is a good deal.

Whenever the access number is not a local call, you'll want to determine the rate before jumping. Some tolls are as little as a penny a minute, others are more than 25 times that amount. Most phone companies have option plans that can help control this cost, so check with your phone company before you decide.

Even with its limitations, the price of PC Pursuit is hard to beat. It is not unusual to see two people living in Los Angeles leave messages for each other on a Virginia BBS because it's cheaper than calling up each other and paying the toll charges. Nor is it uncommon for someone to use PCP to dial their own area code to avoid toll charges.

PC Pursuit is changing the whole concept of long distance communications. Eventually, other carriers will either try to legislate this service out of existence (this is going on right now) or offer competing services. But for now, it is an economical and fun way of using your computer investment.

M.Y. MAILBOX

M.Y. Mailbox is a modem program developed by Greg Stevens, author of the Valdocs Word Processor. Versions of it run under Valdocs 2/3, and on the QX-16 under MS-DOS as well. Greg expects to have a version for MS-DOS clones by the end of January, 1987 as well.

Besides providing all the normal modem program features and exceptional ease of use, this is the first communication program designed expressly to work with PC Pursuit.

M.Y. Mailbox is an important development for QX-16 MS-DOS users since with the single exception of PIBTERM, it is the only modem program that works on the QX-16 in MS-DOS.

Distribution of M.Y. Mailbox is via the Manna Tech bulletin board where users can pick up the latest revisions at any time.

Purchasers of M.Y. Mailbox pay a $25 "subscription" fee after which they may download the current and any future enhanced versions of M.Y. Mailbox for a full year from the Manna Tech BBS. The subscription may be renewed for additional updates after that if desired. For more details, call the Manna Tech Board (213) 633-6343.

Sign up for M.Y. Mailbox by sending a check or money order to Manna Tech, 2170 W. Broadway Suite 610, Anaheim, CA, 92804. You can reach Manna Tech for more details at 714-776-5984.

YOU ALWAYS GET THE BEST FOR LESS FROM GREEN TREE

PEACHTEXT 5000	$39
WORDSTAR HASCI	$69
SPELLSTAR	$50
MAILMERGE	$40
WORDSTAR, SPELLSTAR, & MAILMERGE — ALL 3 FOR	$135
PERSONAL PEARL DATA BASE	$59
MULTIPLAN BY MICROSOFT	$55
dBASE II HASCI	$89
VALDOCS+III	$250
TITAL BOARDS WITH MS-DOS 2.11 and CP/M B2.25 SOFTWARE — 192K $325 - 256K $350 - 512K	$525
256K AUXILIARY BOARD	$185
EPSON MODEM CARD & CABLE	$52
UNIVERSAL CARTRIDGE INKER	$43
STANDARD CARTRIDGE INKER	$35

ALL COLOR INKS AVAILABLE — CALL

Shipping $3.00 per hundred or part, APO, FPO, AK, HI, & PR add $6. Visa or Mastercard orders under $50 add $2.00. Orders under $30 add $3 serivce charge. Money orders, cashiers checks, and personal checks earn a 2% discount, but personal checks delay shippment for up to 14 days for clearance. New Jersey residents add 6% sales tax. We ship COD cash or certified check only for a $3.00 charge.

GREEN TREE

COMPUTER SUPPLIES

P.O. Box 249
11 Osage Road
Rockaway, N.J. 07866

(201) 627-9472
(800) 367-2897

Write, Edit, Publish!

A guide to desktop publishing in the 1980's

Edited By John Whiting

Interviews

By John Whiting

Many persons think of an interview as primarily a set of questions. This is wrong. Others think of an interview as a set of answers. This is closer to the mark.

Even better: think of interviewing as the art of getting someone to talk, to say worthwhile and colorful things, to reveal details.

The artful first step in an interview should be taken before the meeting. Find out, from other persons and from printed material, a lot about your subject---and about his favorite subject. This doesn't mean you should dazzle the interviewee with your prior knowledge.

Keep some of the knowledge up your sleeve, think of it as just background, so you will understand better. Of course, at times your background knowledge will enable you to get to important new matters in the interview, because questions and explanations about basics can be skipped.

Oh, it's a good idea to sometimes ask "How did you happen to go to Lafayette College?" or whatever.

But don't ask a banker to explain how simple interest is computed or the meaning of annual percentage rate. Or, don't ask a retired railroad man to tell you what a caboose is...unless he has a colorful way of talking; then it might get you a quotable answer.

Best of all, let your advance information create a situation in which your subject thinks you are just as fascinated by his special subject as he is. He may even begin to believe that he has fired your imagination and created your enthusiasm.

The second step in an interview---after looking up the basics---is setting up the face to face meeting (let's allow that telephone interviews are for Advanced Professionals, under Special Circumstances.) You prospective subject may be busy, suspicious, angry, afraid,, shy, or just inexperienced.

Here are some pointers on getting past problems and getting the interview off to a good start:

- Remember that most persons want to be friendly, want to talk, and are flattered by the idea of an interview.

- You do not need to use the formal word "interview." Often it works better to say "talk about your trip to Bangkok," or "get your views on the proposed new hospital."

- Most of the time it pays to be honest all the way. Yes, many a good reporter gets three quarters of the way through an interview before tossing in a tough question. It pays to be honest with special situations. Don't promise to leave your subject's name out of it if you don't intend to do just that. Better to say "I can't promise," or "you know that may be impossible."

- Sometimes ingenuity helps break down barriers.. Once I interviewed a newly appointed but seemingly standoffish editor of the New York Times by walking with him---at his usual rapid pace---from his home to his office. I had found out that he walked to work early every morning.

Rarely resort to being confrontational. You can learn a lot by watching the experts on "Sixty Minutes," but you don't always have the clout to do the same things they can do.

The third tricky step in an interview is not taking many notes at the very beginning. Many persons freeze up at sight of a pad and pencil and you may find, as I have, that making notes can interfere with good listening.

Two useful points about notes: (1) make written notes on direct quotations, colorful phrases and some specific answers to important questions. (2) make full notes as soon as possible after the interview (3) Learn the art of making mental notes as you listen.

There are circumstances when a writer cannot agree to submit the written interview for corrections and approval. But there are also occasions when this is desirable, for example when you are interviewing a surgeon about details of a new operation.

Writing the interview is an art. After you write your notes, amplify them into a first draft, but this will not necessarily be like your final write-up.

You might write the interview point by point, just as it develops. This seems logical and honest. But you may also select a vibrant direct quote for your beginning. Or, you might save the quaint remark as the zinger for your ending.

After you write a few interviews, the way in which you weave together direct quotes, summaries, descriptions of the person interviewed and the setting, as well as background facts, will

serve as models for your next-time planning.

Different people, different interviews---of course. Some persons have been interviewed scores of times which makes it all go more smoothly. Too, it may also mean that the subject is adept at sidestepping tough questions.

Recently I listened while a friend talked with a security guard on duty outside a famous person's home. It was all done so adroitly that the guard may never have realized he was being interviewed. In the end his natural talkativeness took over. He just needed an eager ear.

Another friend of mine is always asking questions, not for publication but just to make people feel important. He has become a master at drawing them out, getting them to explain special topics, or to tell how something came to be. He understands how to find a strong point, or a special hobby, and all kinds of human interest details.

A tape recorder can change the entire nature of an interview, even if it makes the result more nearly "accurate." It seems easier, but in my view calls for extra skill on the part of the interviewer and much more sophistication on the part of the subject.

Some interviews are done by mail, with written questions and answers. These usually turn out to be formal, self-serving for the subjects, and without the interplay of ideas and personalities that make a really good interview.

That kind of interview is a one-on-one experience. It is rarely like press conferences seen on television, which are basically contests. They start out with a statement, an attempt to control the ground rules, and then turn into a sort of baseball game, with reporters hurling fast balls and curves and the subject batting out "answers" that often are as far from the original question as left field.

A good interview is a drawing out of facts, feelings, and colorful quotations, with a structure as shaped as any good article or essay. It requires preparation---and of course, a good subject. What has this to do with word processing? First, the speed with which notes may be written down makes a word processor (especially one that is easy to use) an ideal tool.

Second, the organization of material is best done with a word processor. It is far easier to rearrange your text with a word processor than pencil and paper.

Third, the almost final draft can be analyzed, changed, or even done up in several ways. When you think you're done they can be compared or even combined. You'll find that the quality of your writing improves with each revision, and modern wordprocessing makes it easy.

Next month we'll take a look at typography, and describe some nifty tricks you can do with your QX-10.

EPSON

AUTHORIZED
SERVICE
FOR
ALL PRODUCTS
IN OR OUT OF WARRANTY
DEALER RATES AVAILABLE

Dots-Perfect	*$79.95*
Logi Tech Mouse	*$99.95*
Valdocs + III	*Write*

FAST TURN AROUND
EXTENDED WARRANTIES
COMPETITIVE PRICING

A-1 COMPUTERS INC.
268 Forest St.
Pembroke, MA 02359

(617) 293-7014

Tech Tip

Justification can be messed up by ASCII files that have already justified by another word processor with the placement of extra spaces between words and/or lines that are ended by hard carriage returns. Here's how to clean up a transported document with this problem.

Stripping out hard returns at the end of every line: Usually such documents two "hard return" characters between paragraphs. Editing these files is frustrating because word wrapping at the end of lines may go out to lunch if you add or delete anything. Before you start, save editing time by extracting and saving any tables in the text to prevent them from getting messed up by this procedure. Restore the originals after you're finished with the file conversion.

This is a multi-step process and makes extensive use of your GLOBAL search and replace feature. (Use Valdocs' Look-for menu if this is your word processor.) Begin by replacing every period followed by two hard returns with "xxx." to mark the end of each paragraph. Next, replace every hard return with a space. You have to do this because the hard return is stored as a WORD SEPARATOR at the end of a line.

Finally, replace "xxx." with a period followed by two hard returns to restore normal paragraphing. If your text has tables, restore them from your saved copies or hand edit the ones in the file back into table format.

Fixing justification: Justification is restored by getting rid of multiple spaces inserted into the lines when the ASCII document was originally justified. WordStar document and justified Valdocs "ASCII" files both contain multiple spaces that must be edited out.

Begin by replacing all occurrences of four spaces with one, then three spaces by one, etc. Hand edit the existing tables or re-insert the ones you previously saved and bingo, you're done!

The VALDOCS Chronicles

Lonny Brown, Editor

Est. 1986 *"We cared enough to wait for the very best"* Vol 1. No. 5

VAL Attempts Conversion, Exhibits Symptoms of Bulemia

This one's for floppy-based QXers that have graduated to VAL+III (or "2") but still have old (VAL 1.x) documents to work on. They need converting, and it's a job. If this is relevant to you, read on, and learn from my mistakes...

First of all, you can save lots of time and disk space (which you'll need) by by-passing the INDEXER. RSI included IUTIL.SYS on the Utilities disk to update the Indexed names of your files, but I recommend simply jotting down their TPM abreviated names and converting them directly by retrieving them non-indexed (^Q R). You can use Copydisk to peek at them to see which is which.

The conversion utility VALUTIL.SYS is included on the original V+III Editor disk, so if you didn't delete it, it will be invoked automatically when you ask VAL to retrieve a pre-V2 file. If you took it off your working system disk for the space, make sure you get out the latest compatible version, not just any old VALUTIL you happen to have in your box, like I did.

It took me two days to figure out why I couldn't convert files. I was using an older version! VAL will take some time digesting your old file, and then display it. It may look weird, with spill-over margins and many spaces in the wrong places. I had to close-up my text one word at a time.

But the really big problem is space. Not only is the old file left intact and a new one built, but VAL also creates a special conversion file to accomplish the task (EDITCNVT.NAM). Plus, converted files blow up like balloons! And here's where all the potential problems lurk. I've seen simple five or ten page (30K) documents inflate to 300K during conversion!

Because VALDOCS both blows up files and creates many temporary ones during work, it's actually possible to convert a file that becomes too big to store, retreive, or even edit, and it can take some work time before the fatal truth is learned. Here's some rules of thumb to help avoid trouble. The process may seem like a hassel, but you only have to do it once, and if its major work you're updating, you'll be happy for the option.

1. Work on one file per data disk. Start with a blank formatted disk and put only the single non-indexed file to convert on it. Go to Edit and retrieve it (CTRL Q R filename.val). When it's onscreen, don't assume its un-corrupted until you test it out.

2. Immediately after converting a document, check its size (CTRL M A), but BEWARE: the number you get in K-bytes may be wrong (probably way too low). Send the cursor to the end of the document (CTRL Z) and check again. VAL has to "see" the end of a retrieved file before figuring its size accurately. If it can't find the end, it's too big.

3. If the file is over 60K, (about 20 pages) or if you can't even get to the end without a crash, you should break it in half immediately after conversion. Go to page ten or so and delete to the end. Then make sure you can go to the end and get an accurate size before investing any editing time on the document. Use separate disks to convert and shrink both parts of the file. One of my files wouldn't delete to the end of the document. I had to accomplish the break-up with block moves.

4. Before storing the converted file, shrink it (CTRL M S). If you weigh it before and after, you'll see how many K of ugly bytes were lopped off. I now do a "shrink" before storing all my larger files. The first time, on converted files, the operation can take up to five minutes or more.

When a conversion, or "shrink" or block move takes more than 15 MINUTES, you can probably assume the QX has indigestion and sooner or later will chuck up an error message. Return to step one. Block moves are also a good test of the file's integrity.

5. If it's still a question of space, before storing, you can go to Copydisk and purge all unnecessary files, such as the EDITCNVT.NAM, all the .TMP files and the old version of the document. (Save a back-up on another disk, especially if you're doing the conversion in halves.) The catch is, when you exit the Editor to do this house cleaning, you also create another temporary file: EDITCURn.VAL (where "n") is the number of the "view" you

were in. This is the only file you don't want to delete.

6. Store and retrieve the converted file, and test it out with CTRL W, CTRL Z, CTRL M A, CTRL M S, and some block moves. In general, remember that VAL needs a lot of room to breath, especially during conversions. Keep the disk relatively empty of other files, shrink and store often.

When a document is 25 or more pages long, consider breaking it up. It will behave better in the Editor anyway. Of course, if you used the split-file method, you'll have to repeat the process with the other half of the original file and then merge the two. It is a painful, slow process.

One way around the conversion blues is to get out your V-1.* disk, retrieve the file, store it as ASCII, boot back to V+III (you'll have to walk through re-initializing the system) and retrieve the non-indexed file. Another way is to get a QX-16HD, with a hardisk. They can eat anything.

Useful New Documentation Appears

Valnews of San Francisco introduces Q-NOTES, a series of Epson QX user notes, tech sheets, and indexes, organized by theme. I got Q-NOTES on making single load disks, CPL, HASCI-izing Out-Think, the "Version" utility, a TPM User's Guide Index, and an index to the whole V+III manual. They're about a buck a sheet. For a complete catalogue of Q-NOTES, write Alan Magary, XBK, 904 Irving St., Suite 271, San Francisco CA 94122 (415) 661-9270. Tell him thanks for his contribution to the incredible shrinking world of VALDOCS!

BUG ALERT!

My VAL+III Spreadsheet crashes when I try to insert a block. Anyone else find this "Undocumented Feature" ?

Start a Family Newsletter!

Family newsletters are a great way to keep a scattered family together. Here's how one person, stationed in Germany, stays in touch with her family back home in the States.

By Patricia Schmidt

Families today are hard-pressed to keep in touch --- most of us work, have other commitments and are bad at regular letter writing. The answer? Write a family newsletter on your computer! It's a lot more fun than letter writing, and it's a novel way to keep your family up to date. Using your Epson makes it easy.

The new "desktop publishing" craze need not be limited to companies putting an entire magazine together with lots of expensive equipment -- you can use VALDOCS and your Epson computer to print your articles, and then paste them onto layout sheets. Then copy the whole thing, and send it out to members of your family. That's how I put together my family newsletter, called "Kith & Kin". And I charge subscription rates, so publishing the newsletter doesn't cost a thing.

I write the articles in condensed type using VALDOCS, setting up narrow margins so the copy looks like a newspaper column. I print it all out, cut everything carefully, and paste them up on layout sheets. (You can use plain white paper for your layout sheets.) I add headlines and artwork mostly from VALDOCS and Printmaster World, Inc. and have it printed at a quick-copy service.

Printmaster is a program that lets you use your computer and printer to make your own greeting cards, stationary, calendars, banners, and signs. There are 122 pre-designed graphics (you can buy two additional disks full of art), 8 fonts, 11 borders and a graphic editor.

I bought the QX-10 version for $59.95, and also purchased the Art Gallery I disk for an additional $29.95. These programs are available by mail from Unison World, Inc., 2150 Shattuck Ave., Suite 902, Berkeley, CA 94704, (415 -848-6666) or at many local computer software stores. Unison World provides information and technical support. Except for the graphic editor, which requires a Hercules Graphics card (an MS-DOS fixture), it works flawlessly on my QX-10.

Once it is printed at a quick copy center, I fold and staple the pages, slap on address labels (printed with VALDOCS MAIL) and they're ready to go! Two weeks later everyone in the family has the latest news.

You can be as creative or as simple as you like. I personally like the 5 1/2 by 8 1/2 inch format. It's easier for me to compose, and easier for readers to handle. You may prefer computer-sized paper, and forego the artwork but whatever your choice, remember what's important is keeping in touch, not how "good" the newsletter looks.

Try publishing your own family newsletter. It's easier (and less expensive) than you think, and it sure beats the annual "Christmas letter" because it'll draw your family closer together thoughout the year, a comforting thought in this busy world!

(Ed. Note: Unison World has now released PrintMaster Plus, that now allows previewing the graphic design as it is being composed, improved menus, a better user interface, two additional fonts, several new "font effects", and other graphics enhancements. This program is presently available only in MS-DOS ($59.95) and for other non-CPM computers. We'll review of PrintMaster Plus in an upcoming issue.)

ABILITY VS. VALDOCS

EW's resident Valdocs guru takes on the MS-DOS Ability software package, and says he likes it. Unbelievable.

By Lonny J. Brown

As EW's editor promised last month, for those contemplating entering the IBM-compatible universe, here's your resident die-hard VALDOCS fan's first impressions of the integrated software package bundled with the EW Clone. But first, a disclaimer: This writer has no personal financial interest in what I'm about to report. Even though I'm listed as Associate Editor, my writing for EW thus far has been gratis.

I say this because I'm so impressed with ABILITY that you may find it difficult to believe that this is an unbiased testimonial. After years of reviewing home-computer programs, this is the first time this user, raised on the friendliest and smartest of them all, has finally found something else to get excited about! It's a fully integrated system worthy of the comparison. Whoever wrote Ability is either pretty smart, or has seen Valdocs. Probably both.

The program is extremely easy to use, particularly for non-technical beginners, yet quite sophisticated and powerful. In technical terms, it has a nested menu-driven, graphically oriented point-and-choose command structure (supplemented with mnemonic key aliases for even faster action: just hit the first letter of your choice).

Translated, it speaks plain English, and always shows and tells you what you can do. It remembers and highlights your last menu choice. Key command assignments are consistent throughout its half dozen modules, and there are no arcane codes to learn or look up. It's designed so that the end user never has to go downstairs to the DOS basement. You barely need the manual to learn it, and well-written, condition-specific on-screen HELP is always a single keystroke away. It also protects active work if you walk away, or exit without saving. Sound familiar? Read on.

Like VALDOCS, ABILITY looks great on-screen. It uses shadings, reverse video highlighting, and screen graphics well. The informative status line shows percentage of space remaining on drive, application name and filename. There are "caps lock" and "num lock indicators" on-screen too, and a "FLIP" (View) indicator. The Command Area shows options, and explains the highlighted choice.

Opening screen, and home base in ABILITY is an all-purpose organizer called LIBRARY, It's like a combination of VAL's MENU, INDEXER, COPYDISK, and SETUP. It shows all files and programs on disk and in RAM, clearly categorized by application. Only an asterisk distinguishes files in memory from disk files. To get a file on-screen, or even run a foreign program, you just point to it and ask. In addition to all file handling, you can print from LIBRARY, change and create MSDOS directories, display stats (name, size, last work date and time, and disk space available), and change peripheral devices.

One shortfall compared to VAL's INDEXER: ABILITY's file names are limited to eight characters, but when combined with the MS-DOS directory system, filing can be done by category and this restriction isn't as bad as it might seem at first. Also, title searching is by human visual scanning only. (VAL can cross index and file-search by entering names, strings, etc). Some other small differences: ABILITY requires a name before a new file is opened. It keeps files in memory even after storing to disk and you must intentionally remove them. When copying files: no default name is offered. You must give a copy name each time.

ABILITY consists of five main applications: DATABASE, SPREADSHEET, GRAPH, WRITE, and COMMUNICATE. (Thank heavens they used the generic names and not something cute, like "Spread-Ability"!) Of course the ideal is seamless interaction among the departments, and ABILITY succeeds brilliantly here. Improving on VAL, it offers two-way, real-time interactivity: You can bring all or part of a live spreadsheet into your word-processed document and continue operating it. The copy in memory automatically updates. Similarly, linked files in WRITE, SPREADSHEET, GRAPH, and DATABASE automatically revise when changes are made to their counterparts.

Furthermore, with ABILITY you can put powerful, interactive spreadsheet/database-like fields anywhere on a text-page. They can have names, numeric values, special formats, or formulas attached to them, and be linked internally as well as with other text, database and spreadsheet files. With sophisticated command codes you define how you want them to relate: get averages, percentages, computations, today's date, or linked data from another file. This is very powerful. It blurs the distinction between edited documents and data base records. Your imagination is the only limit. And you'd be surprised to see how

easy it is to accomplish all this. ABILITY definitely takes integration a few steps further than VALDOCS.

In VAL, the HASCI control keys are consistent throughout the system. ABILITY does this with function keys for "HELP", "COMMAND" (an options menu), "SHADE" (block marker), "GOTO" (search), "PICK-UP" (delete) and "PUTDOWN" (UNDO). "DONE" acts like VALDOCS' STORE function. You can also "FLIP" between files; equivalent to VALDOCS' "VIEWS", but Val offers up to eight, ABILITY only two.) The ESCape serves as both STOP and UNDO commands.

ABILITY's editor, called WRITE can be classified as full featured and serious, with all the expected and necessary capabilities. VAL writers would miss bi-directional deleting, and the capacity to manipulate by sentences and paragraphs. Also, ABILITY's "UNDO" buffer (called PUTDOWN) only remembers your last deletion. VAL's is the only one I've seen that undeletes in sequential stacks. In ABILITY, indentations are made by pointing where they go, not entering values. VALDOCS offers both. Both search and replace character strings with wild cards, but only ABILITY can search backwards.

ABILITY doesn't seem to have any placemark settings, Val does. As in VALDOCS, there's no footnoting, no word counter, no hyphenation. You can mail merge from the Database module. Rumor has it there's a spell checker for ABILITY in the pipeline. VAL's has been reported as buggy. Perhaps the most important advantage ABILITY offers over VALDOCS is speed. Block moves, scrolling, reformatting, are nearly instantaneous by comparison. We understand that the speed difference is equally dramatic in other applications.

ABILITY's on-screen document display is nearly WYSIWYG. ITALICS, BOLD and UNDERLINE show well (when using the graphic screen display), but there's only one font size, as opposed to VAL's four (or 12, if you count super- and sub-scripts). And the text on screen displays smaller in the graphics mode than in text (you can chose between a "text" and "graphics" screen display). Unlike pictures imported from VALPAINT to the Val editor, ABILITY lets you enter text anywhere on the graphics screen.

Page headers & footers appear on-screen, with a choice of text, page numbering, or date in several formats, including long form, with the day of the week, and the month spelled out. (I've always wanted that feature!)

Headers and footers can go in any combination of left, center, and right. Printing: you can select characters-per-inch, and print sideways. The menu offers Draft or Final ("Correspondence") quality, for printers that support it.

ABILITY also has a Macro maker similar to CPL/DEFKEY in VALDOCS, to abbreviate long and repetitive keyboard tasks. It offers 30 macros with up to 250 character/keystrokes in each. It's not as quick and good looking as CPL: ABILITY's macro commands are written in code, and there's no keystroke capture buffer to let your fingers do the walking, as in VAL.

The SPREADSHEET in ABILITY is full function, and comprehensive.. advanced features include:

- Auto field fill (fills columns, rows or ranges with values of specified increments.
- Sorts rows and columns by numbers or letter.
- Transposition (horizontal to vertical).
- Use spreadsheet to build tables.
- Merge and Consolidate spreadsheets.

Heavy stuff, and it can directly import Lotus 123 files besides.

Likewise, the DATABASE is vast, but it's also easy, and logical. Each form can behave like a mini-spreadsheet, doing automatic calculations on entered values. For example any client's record could have a running "Balance Owed" automatically computed from outstanding bills minus payments, either entered on the record, or from a linked spread sheet. You can also generate graphs from DATABASE.

ABILITY's GRAPH is similar to VALDOCS, but not as fancy. It makes clustered bar chart, line plot, pie chart, or stacked bar, plus horizontal bar graphs. Graph size is not variable, but you can freely position a graph on the page. You can also put two kinds of graphs on one screen/page. Titles on top only (But you can type in a title anywhere from the editor.) Graphs can be built from (or linked to) spreadsheet data.

ABILITY can COMMUNICATE with LANs, mainframes, & info nets. It also emulates VT52, VT100, and dumb terminals. Like Val, it has a communications capture buffer, with toggle on/off. Also auto logon, and auto answer. I haven't checked it out yet. Unfortunately, Ability's telecommunications module will not work on the QX-16.

For PC's equipped with a graphics card, there's PRESENTATION!, on a separate disk. It's takes "snapshots" of any screens you choose and creates a "SlideShow". Any documents can be included in the presentations. You can spruce up the show with additional multi-font text, graphic symbols, and even music.

Though the manual is excellent, you can use ABILITY without it. Ability also comes with the best on-disk tutorial I've seen. Demo files are included. ABILITY comes on four disks, but essentially works with one, with no heavy swapping. There's also not nearly as much drive activity as with VAL. Instructions also cover hard disk setup. (Basically, just copy all four disks into a directory, then type "Ability" to run it.)

Conclusions: VALDOCS was conceived as meeting 95% of the computing needs of most users. Unfortunately, not many users got to use it.

MS-DOS applications, this is the most painless software to land on.

Ability, which normally retails at $99, is available at only $69.97 through Polytronics (see ad elsewhere in this issue).

Depending on your new hardware, you might miss your QX keyboard and screen, but this software won't look like Greek to you, and it'll be a lot faster and bug fee than what you're used to. And you can be doing productive work practically as soon as you've turned on your machine. If you have disk cases full of important data in VALDOCS/TPM format, fear not: you can use RWCPM or Uniform to convert non-indexed Val files to MS-DOS for use with Ability.

If you soon find yourself spending most of your computing time in ABILITY, stick some name labels on the function keys (you actually won't need them), and call it home.

Val Tip

By Darren Duricka

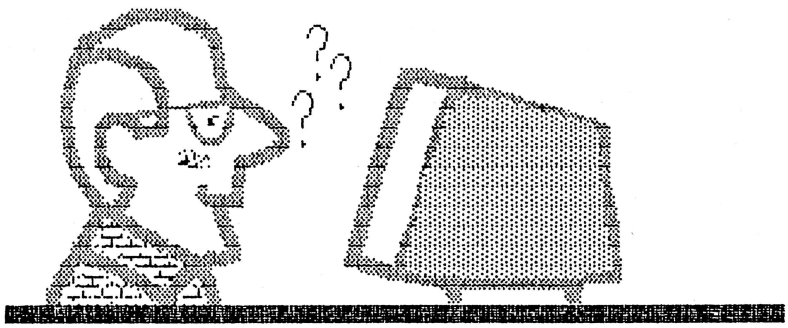
Converting your V1 files into V2 is a problem because up the CMOS RAM is reset when switching between V1 and V2. To avoid resetting CMOS:

1. Make a V2 data disk and copy the TPM-II or III operating system onto it.

2. Next, copy the following files from Version 1.18 (or 1.19):

VLOADER.CHN
VDRIVER.CHN
TPM.CHN
FONT.FNT
LOADUP.CHN

4. Rename VLOADER.CHN to INITIAL.INI. Now you can copy any files that run under VAL 1, such as COPYDISK, to this disk for easy use without reseting the CMOS memory.



BOB LINDBORG

261 18th Ave. N.W./Great Falls MT 59404

Creativity

is the name of the game when you have a computer around the house. EW gets a lot of mail from all over the country so we see what people do with Valdocs. **Bob Lindborg's letterhead** is one of the nicer we've seen of late. He has several "poses" used for different kinds of letters. Nice work, Bob! Let us know which Disk of the Month you'd like us to send you **FREE** for your classy letterhead design.

P.C. Computer Brokers Inc.

The Place To Buy Your Epson Printers

LX-86 List $349.00 $229.95

420i List $1995.00 $995.95

FX-85 List $599.00 $369.95

FX-286 List $799.00 $499.95

FREE Stand With Purchase of any Epson Printer at P.C. Computer

LQ-800 List $799.00 $519.95

LQ-1000 List $1095.00 $719.95

Call Toll FREE 1-800-245-1455

THE MOST ESSENTIAL CARD FOR THE EQUITY I

- Able to bring the mother board to 512K
- ½ the size of other cards
- Save up to $70.00
- 3 year warranty

Only $99.95

Call For Price On HS-80

EX-800 List $799.00 $499.95

HI-80 $369.95

EX-1000 List $995.00 $689.95

LQ-2500 List $1595.00 $1089.95

DX-35 $650.95

Prices Subject to Change Without Notice

Add 2.9% For Use of Visa, M/C & Choice. Add 5% For Use of Discover & Amer. Exp.

These Prices Are Good For Mail Order Dept. Only

P.C. Computer Brokers Inc.
3879 East 120th Ave.
Thornton, CO 80233
(303)450-8727

Call Toll FREE 1-800-245-4122

ACCOUNTING FOR MICROS

$395 Set of Four
$325 Set of Three
$465 Set of Five

ACCOUNTING FOR MICROS is a set of integrated accounting programs which meet professional standards. They're fast and easy to use, with complete instructions. Our manual (shown above) also includes helpful information on bookkeeping and computers.

GENERAL LEDGER $125
Allows up to 1,000 accounts & 1,000 transactions/month. Retains mo/end balances for Last year, This Year and Forecast. Includes Cash Disbursements, Cash Receipts and General Journals. Reports include Balance Sheet, Income Statement, Annual Summaries and Journal Reports.

ACCOUNTS RECEIVABLE $125
Allows up to 2,500 customers and 1,000 invoices per month. Invoicing can access Inventory Module. Keeps customer names and addresses. Invoice prints on plain paper or any pre-printed form. Statements can be printed at any time.

INVENTORY $125
Allows up to 4,000 parts. Keeps 3 month history of unit sales as well as year to date. With AR, can be used as point of sale system (prints invoices, handles cash). Reports include Inventory Value and Stock Report, Internal and Customer Price List.

ACCOUNTS PAYABLE $125
Allows up to 500 vendors and 600 invoices/mo. Records invoices and handwritten checks. Prints computer checks on any pre-printed form. Keeps vendor names and addresses.

PAYROLL $125
Will handle up to 100 employees with six deductions per employee. Deductions may be determined as fixed dollar amounts or percentages, or referred to a table for automatic look-up. Tax tables are easily entered, or purchased separately.

SET OF FIVE $465
SET OF FOUR $395
SET OF THREE $325

RUN ON MOST CPM AND MSDOS

Apple CPM	*IBM PC,XT,PC jr,AT*	*Sanyo (all)*
Columbia	*Kaypro (all)*	*Tandy (all)*
Compaq	*Morrow (all)*	*TeleVideo*
Corona	*Osborne (all)*	*Zenith 100 & 150*
Eagle (all)	*Panasonic*	*8" CPM*
Epson QX-10	*Radio Shack CPM*	*Other compatibles*

DEMO DISK
$18.00

Try all 5 programs above (GL, AR, AP, IN, PR). Order our DEMO DISK for $18.00 (includes shipping). Condensed versions of the programs give you the "feel" of data entry and access. Includes sample reports and instructions. Specify machine.

TRASHMAN (NEW) $145
The "Catch-All" program. Files any type of information for quick access. Name or subject oriented with 15 lines of notes per name. Use TMAN as a mailing list, filing system, notebook, etc. Can be used alone or with data from our other programs.
Try ***TRASHMAN (only) DEMO $16***

HOW TO ORDER: Please specify machine and disk format. You can pay by check, by VISA or MasterCard (we need your expiration date and card number), or by UPS COD (add $2.50 COD charge). Our price includes shipping. Minnesota residents, add 6% sales tax). We ship most orders the same day.
or ***ORDER BY PHONE: 612-339-2521***

James River Group
INCORPORATED

(612) 339-2521

125 North First Street
Minneapolis, MN 55401

The Mail Bag

I have two questions about hard disks. Like most Valdocs users, I am tired of "flipping floppies" to load the editor, spreadsheet, dictionary, etc. I'd like a hard disk to eliminate the swapping and gain speed. Will a hard disk do this, and more importantly, will I be able to use it three years down the road when I go with an MS-DOS machine?

Ed Acheson
Decatur, IL

A hard disk will certainly eliminate the disk swapping Valdocs users must endure, and it will speed your system performance somewhat as well. If you decide to buy a hard disk route, generally it is better to go with the 20 megabyte system, rather than a smaller size; 10 megabyte models tend to fill up more rapidly that anyone expects. About compatibility three years down the road? Presently it costs about $200 for an adapter card from Forrest Micro to move your QX hard disk system to the MS-DOS realm. Today you can buy an MS-DOS 20 megabyte hard disk and controller card for $450 and less. Is there much point in trying to salvage something like this three years later when prices will probably be even lower?

Thanks for the articles on the MS-DOS side and information about hard disks. Please continue to provide this type of information and remember to keep it simple. Don't forget the little details all the experts take for granted. Those of us who are just learning don't know about all the little things necessary to make everything work together smoothly.

Carol T. Hauser
Lynchburg, VA

It is often difficult to understand that everyone doesn't think at the same level as yourself. We'll try to make sure no one gets left behind when we run our "tutorial" series, which will include a number of interesting computer topics. Thanks for writing.

Really enjoy Epson World since you took it over. Please keep up the good articles that seemed to suddenly appear in the magazine. I wasn't going to renew, but the last few issues have really been helpful.

Richard Cotten

Thanks for the note, Richard. There are stories and articles of interest in practically everything we do with our computers. If it weren't for the help and effort we've received from throughout the community, the August issue would have been the last you'd seen of EW. Presently EW is in excellent health, and growing like a weed.

I received the October 1986 issue of Epson World. I am not subscribing because there is simply too much dedication to Valdocs and RSI. Valdocs is a lost cause, a program that never did really work.

Forrest R. McCuiston
Palm Desert, CA

Tell your story to someone who cares. A lot of people have made, and continue to make, effective use of Valdocs. Those who are satisfied with its performance find it useful and are in no hurry to switch. However, many in our community, having tamed the computer with Valdoc's help, are moving on and finding greater productivity with other software and computer systems.

I must admit that not much of value was in this past (November) issue. Most of us, I would judge, are not interested in CP/M, MS-DOS, RSI BASIC and recipes.

Richard L. Sanner
Clemson, SC

Thanks for the great magazine. The last four issues have been the best yet. I recently bought the color monitor from International Trading and found it is a snap to install. Does anyone have any color "art" for ValPaint? The Volume 1 coloring book from RSI is all monochrome. So far my only complaint is the lack of complete dimming control with the brightness knob so I can tell what character is showing through the cursor in reverse video. Can anyone help?

Barry C. Norris
Anaheim, CA

Barry's problem with the monitor is real. We can't read anything we type in the spreadsheet cells where the cursor block is "reverse video" either. Don't know of anyway to completely dim the screen, and doubt this would help much anyway.

My wife and I made the biscuits in the November issue. They were great.

Charles R. Ott

Only got three or four comments about the Shaker biscuit recipe in the November issue. Figured I'd get more of a reaction, one way or another, than that. I can only say that if you haven't eaten any of these, you haven't lived.

Robert L. Zuccala: You say that your present avocation is the result of your failure as a software engineer?

The Winner!

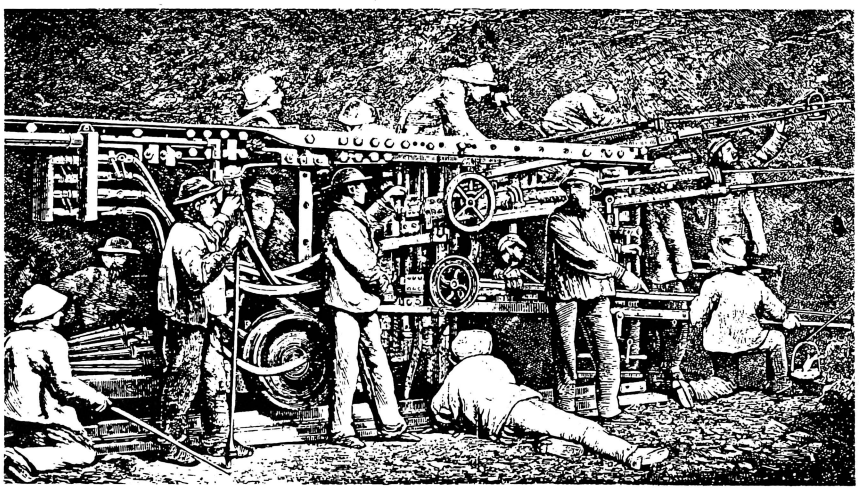
Our congratulations go to Roy Wulff of Kingston, NY, our November winner: "Now you tell me you have to go to the John!"

We had quite a stack of other good entries. Here is a sampling:

Howard Gilbert: Is this what the HELP button does?

Ralph Head: This is knot the way to make friends.

Louis E. Steinfeld: Sorry, but this is the only way I can get my money back.



Immortal Caption Contest!

Come up with the best caption for this picture and win a **FREE** Disk of the Month! Put on your thinking cap, let your experience and imagination stew together, then jot down your entry and send it to the Immortal Caption Contest, **Epson World Magazine**, Box 369, New Boston, NH 03070.

The recent issues of EW have been really interesting, especially with your humor and wit. You must have a really twisted imagination. I enjoy the "Dead Horse Computer Company." I know what the disclaimer says, but it sounds like a California software developer we all know.

James Hoehn
Echo News & Cues Editor

I double checked with Dead Horse Computer author Nan McCarthy, and she finally admitted she's been writing about IBM and Lotus all along. First hand accounts, she says. Seemed like a lot of familiar stuff there, got to admit.

I own a beautiful parcel of land in Andorra. If I win the castle, I'm going to have it moved there and invite you out for a skiing vacation and a home cooked Andorran feast. You can keep the Rolls, it's a little fancy for a plain guy like me.

R. J. Smith
Los Angeles, CA

Sorry, R. J., but as you must know by now, the castle was destroyed by an avalanche and is now resting under tons and tons of packed snow. Besides, what you suggest sounds a little like you're trying to bribe us. Our policy, in matters like this, is that we don't lie, cheat or steal, unless the price is right. Just exactly what did you plan to serve at the feast? (Pat says she'll go!)

This will be short. I want to make your deadline, so here's my renewal. Computers and goose poop - a dynamite combination.

Ben Ellison
Camden, ME

We do put out the poop on computers around here, but I don't recall anything about a goose.

I use a CR-103 with the fix on the QX-16 with Val 2. All is fine, except it will not hang up when I finish a BBS session. I am forced to reboot if I want to make another call. Epson in California has no answer, but the local

advice is a software problem, but no way to fix it. Any suggestions?

Leon G. Wigrizer
Philadelphia, PA

First, why not just unplug the phone cable from the wall or modem (you could make a switch to do this if you'd rather) to avoid re-booting the system? You really only have to break the connection to the phone line to get it to hang up. When you plug it back in, the modem should be ready to dial the next number. You might also try the modem software that came with the 103. If it doesn't hang up when using that, perhaps your problem is with the modem, not the software. Can any of you readers shed some light on this problem?

We have founded a club for QX-10/16 users in France and have about 60 members, and would be interested in exchanging newsletters and information about hardware and software.

Daniel E. E. Goudeneche
Vice President Club QX
6 Rue du Flamant
38090 Villefontaine
France

Anyone interested in establishing international connections with France should get in touch with Daniel directly. Let us know what happens.

Thank you for publishing the information about our user group (the Epson Circle of Help Organization) in Finnegan's Flea Market. This brought us in touch with several Epson users and some new members.

It is too bad J. T. Volger didn't contact SemiDisk when he couldn't get his 2 meg SD to work. We had the same problem at first, but it was promptly taken care of by SemiDisk tech support.

Jean Thompson
Secretary, ECHO
913 E. Glendale Ave.
Appleton, WI 54911

Glad to help, Jean.

You're right on two points: (1) the AAAEUG newsletter is one of the best around (see "User Group Newsletters", Nov. 1986), and (2) Finnegan's Flea Market has an enormous pool of potential advertisers.

Roger P. McConochie
Ann Arbor, MI

Wally, who edits the AAAEUG newsletter, besides being a pretty straight forward fellow, is generous and most helpful. We've gotten several complimentary letters about him and the AAAEUG newsletter.

I'm confused by the "in" language used in your magazine. Isn't it possible to be a bit more instructive about what is meant? It's almost as bad as an instruction manual.

Harry E. Sorenson
Sacramento, CA

We try to keep things technically tepid in most area's of the magazine, but it isn't fair to expect everyone to be able to understand everything going on in all departments. This month's Language Lab is an example; unless you're interested in programming you aren't going to enjoy the program listing. But if you read the story, you'll get an understanding as to WHY you find Valdocs easy to use. Don't intentionally skip something in this magazine because it outwardly seems unrelated to your interests. Part of the reason you subscribe to EW is to learn how use your computer. For example, you may be able to make CARDFILE work, but if you have a little background in data base management, you'll understand how to get more out of this program. Be patient with yourself if things aren't clear. If a computer is an infinitely malleable tool, it will take a long time to learn all the possible ways of using it.

Free Disk of the Month!

Send us your nifty tips and new discoveries, and we'll give you, absolutely free, the Disk of the Month of your choice for each tip published.

Epson World Magazine

Using the Bradford Utilities with Valdocs Files

By James L. Webb

The Bradford Utilities offered in EW's September '86 CPM Disk of the Month can be easily used with Valdocs files to take advantage of new fonts and other printer features not offered by Valdocs. Although not tested, this procedure will probably also work for printing those files that are "too large" using the normal Valdocs print mechanism. The procedure is simple.

1. In the EDITOR, select the quirks menu (control-Q) <T>PM Directory and make sure you have the following "Bradford" files already copied onto the data disk:

BRADFORD.COM
BRADFORD.INF
FONT (1 through 8).BIN

2. Make sure your have the documents to be printed also on the data disk. Use step 3 if necessary.

3. Store documents to be printed in the "non-indexed" format. First retrieve the document, then, using the Quirk menu, select <S>TORE AS A NON-INDEXED FILE, then choose <P>AGE FORMATTED ASCII. When prompted for the name you can leave the name as it is (a horrendous meaningless TPM filename) or supply your own.

4. The Valdocs editor will return to life ready to start a new document.

5. Time now to run the Bradford printer program. Select <M>ENU OF APPLICATIONS, the <R>IGHT drive, press the return key and select BRADFORD.COM.

6. Follow the directions issued by Bradford and you're all set.

From personal experience, Valpaint, Valdraw and most Epson fonts will **not** work with the Bradford system.

EXPANDING HX-20 CAPABILITY WITH AN EXTERNAL PRINTER

This month Cliff tells about his LX-80 printer and gives us a handy typewriter-like program for use with the HX-20. This program can easily be duplicated for use with any other computer-printer combination by those looking for a short and simple programming exercise.

By Cliff Eckenboy

One of the most useful features of the HX-20 computer is its unique on-board microprinter. The BarChart program featured in the November issue of EW illustrated but one effective use of this handy computer. With a 24-character line width on a 2-1/4 inch ribbon of paper, this little wonder churns out notes, lists, and memos on the spot for immediate hard-copy use at a respectable 42-lines-per-minute rate -- not bad, not bad at all. And I have to confess that, prior to acquiring a full-size printer, I had more than once written a full-length friendly letter entirely on this little chugger. No recipient complained, either (too amused by the scroll, no doubt).

But, it must be admitted that for business correspondence, manuscripts, full-fledged reports, etc., an external printer is a must. Even routine L-LISTing of BASIC programs is vastly improved by the elimination of unwanted word wrapping. Other advantages become increasingly apparent with continued use.

The LX-80 Printer

I am currently using the Epson Spectrum LX-80 printer with a serial interface board. It is my first printer, and I was attracted to it mainly for its low price (about $215 U.S.) and its "SelectType" feature. This handy feature allows push-button selection of width, weight, and style of characters (including an excellent near-letter-quality mode), all from the printer's control panel. And no if's about it, this sure beats placing (embedding) printing codes in all your documents, although that option remains available.

Like other Epson printers, the LX-80 is a parallel device, and therefore requires the installation of a serial interface board to make it compatible with the HX-20. This is an electronic circuit board that mounts inside the printer enclosure and can be easily installed by the user. Indeed, I found that removing the printer cover was more difficult than mounting the interface board itself.

Installing the Serial Interface

The inside-front mounting screws are no problem, but those tenacious plastic tabs (nay, hooks!) at the rear edge needed substantial physical (and verbal) coaxing! (It would have helped immensely if the board's included instructions had been for the LX-80 printer instead of the RX, FX series -- thank you Epson). Finally, the cover can be lifted to the side, though not completely free of the printer base.

The interface board must be mounted at the left rear by first mating its multi-pin connector to the matching socket below and then mechanically securing the board in place with mounting screws to matching plastic mounting posts. It is important to disconnect the existing frame ground wire and reconnect it to the ground terminal of the interface board. This will ensure a proper ground bonding for all electronic components.

I found it necessary also to change two DIP switch settings (you know, those Lilliputian levers that, even as a child, your fingers were too big to throw) from the factory-set condition to a setting that would allow data transfer from the HX-20 to the printer. This baud rate should be set for 4800 baud and requires that DIP Switch-1 pins 6 and 8 be in the "on" position. All other DIP Switch-1 settings should remain "off". The factory-set condition for DIP Switch-2 is correct if set at: on, on, off, off, off, off for pins 1 through 6 respectively.

When mounting is complete, all is well if a staggered, double-row, 25-pin cannon-type female connector is exposed at the rear of the printer, directly above the now-vestigial Centronics parallel connector. Epson cable No. 715 connects to this new socket on the printer, while the other end connects to the RS-232C port on the HX-20 with a round-configured 8-pin DIN connector. Whether using the printer or not, I recommend that this cable connection remain in place to preclude excessive mechanical stress.

In any operation requiring the use of an external printer, it is always best (and often mandatory) to turn the printer on before turning on the computer. Failure to follow this procedure will sometimes block the transmission of graphic-character signals to the printer.

Using the Printer with BASIC

And now, on to a few guidelines regarding the peculiar requirements of the HX-20 computer when communicating with an external printer of any brand. Because the HX-20 has a built-in microprinter, it interprets all LPRINT statements/commands as addressing the on-board printer. Therefore, all LPRINT statements must be revised to read: "PRINT#", followed by the numeral chosen for the device (see TypeWrit Program, line 500).

But before you can do that, the RS-232C serial port of the computer must be OPENed, as in line 150 (note that COM0 is spelled: C-O-M-zero). This will allow free communication from the HX-20 to the printer, completely bypassing the microprinter. (Program "L-LISTing", on the other hand, only requires typing: LIST "COM0:").

About the TypeWrit Program

The TypeWrit program given here is both a printer "setup" procedure and a simple typewriter routine. If you are interested only in printer setup, abort the program run after line 290 (hit "break"). The remaining program lines cause the printer to behave like a typewriter, but with a few enhancements: The most useful being that text input is collected in memory (line 490) before printing so that corrections can be made before the characters go to the paper. When the return key is pressed the text is sent to the printer and editing opportunities cease.

As on a conventional typewriter, manual carriage returns are required at the end of each line (maximum of 64 characters) to avoid word wrapping at the printer. Even this minor inconvenience can be eliminated by setting the printer to near-letter-quality (NLQ) mode and letting the automatic full-justification option (line 230) take effect. No word wrapping will occur, even left-right margins are maintained and carriage returns are required only to begin a new paragraph. Very handy indeed!

If your printer does not have the Master-Select feature of the LX-80, revise line 470 to send a print-font code suited to your needs and printer requirements. Page margins can be changed, of course, by modifying lines 200 and 210. Experiment a little.

If you presently do not have an external printer, and are contemplating a purchase, I highly recommend the Spectrum LX-80. The near-letter-quality print and push-button control features alone commend it.

WINCHESTER CAPACITIES!

HARD DRIVE SUB-SYSTEMS

10 MEG $795!
20 MEG $995!
30 MEG $1195!

OUTSTANDING FEATURES:

- *FULL PARTITIONING (no ram munching overlays)*
- *TOTAL SUPPORT OF CP/M, VALDOCS, and MS-DOS*

Call or Write

MPS
213 Kenroy Lane #9
Roseville, Ca 95678
(916) 786-6550

VISA • MASTER CARD • AMERICAN EXPRESS

Tech Tip

Using SZAP in TPM

By Leslie Clark

Many of us use SZAP in CP/M and enjoy its speed and elegance. Using it under TPM, however, is something of a nuisance, because the arrow cursors were not implemented, and the use of the CTRL-h, j, k, or l to move around whilst modifying ASCII characters in the disk file is a bother. Val+III now has made this capability trivially easy to implement. From MENU, just:

<E>xit to TPM

Then enter "CPL"

Move cursor to (using the down arrow) key, press RETURN to enter it, and enter "(plus or minus) CTRL J" and press STORE.

Move the cursor to the (left arrow) key, repeat the above steps, except enter "(plus or minus) CTRL H" for this key.

Move to the (right arrow) key, and repeat the above steps, except this time enter "(plus or minus) CTRL L".

Move cursor to the (up arrow) key, repeat the above steps, and enter "(plus or minus) CTRL K". Press CTRL-STORE to store the key definitions.

When asked for a description of the file, enter "Cursor Definitions for SZAP.COM", then "SZAP" for the name of the CPL file.

The file of key definitions you've just created will be stored as SZAP.CPL; when SZAP is invoked under TPM, these key definitions for the cursors will be activated, and you'll find new freedom in moving around and changing the ASCII characters displayed.

Enjoy.

TypeWrit for the HX-20

This simple BASIC program simulates a typewriter, driving an external printer connected to the serial interface. After TypeWrit is used, be sure to use the CLOSE command to turn off the serial port which causes heavy battery drain when used. This program can be easily adapted for use on any computer/printer combination.

```
100 REM ****************
110 REM ***SAVED AT:"TYPEWRIT.01"
120 REM ****************
130 CLEAR 600
140 REM ***OPEN RS232 SERIAL PORT FOR DEVICE #1:
150 OPEN"O",#1,"COM0:"
160 WIDTH "COM0:",255
170 REM ***ACTIVATE HX-20 GRAPHIC SET:
180 PRINT #1,CHR$(27)"m"CHR$(4);
190 REM ***SET PAGE MARGINS:
200 PRINT #1,CHR$(27)"l"CHR$(8);    'LEFT
210 PRINT #1,CHR$(27)"Q"CHR$(72);   'RIGHT
220 REM ***ACTIVATE NLQ FULL-JUSTIFICATION MODE:
230 PRINT #1,CHR$(27)"a"CHR$(3);
240 CLS
250 PRINT "  Printer Setup & "
260 PRINT " TypeWriter Program"
270 PRINT " For HX-20 Computer"
280 SOUND 4,2:SOUND 0,2:SOUND 8,2
290 SOUND 0,2:SOUND 4,2:SOUND 1,8
300 FOR DELAY=1 TO 1500:NEXT DELAY
310 PRINT "If automatic Full-"
320 PRINT "Justification Print"
330 PRINT "is desired, then..."
340 FOR DELAY=1 TO 1500:NEXT DELAY
350 PRINT "Set Printer to NLQ"
360 PRINT "mode at the Printer"
370 PRINT "control panel."
380 FOR DELAY=1 TO 1500:NEXT DELAY
390 PRINT "0=maintains Pica/NLQ"
400 PRINT "  printer settings."
410 PRINT "Enter Master-Select"
420 INPUT "Number, here:";M
430 PRINT "   Begin Typing:"
440 PRINT "(hit Return for line"
450 PRINT "feeds, as required)"
460 REM ***ENABLE MASTER-SELECT FEATURE:
470 PRINT #1,CHR$(27)"!"CHR$(M)
480 REM ***COLLECT TEXT INPUT & ALLOW EDITING:
490 LINE INPUT TEXT$
500 PRINT #1,TEXT$
510 GOTO 490
```

Notice to Readers

Last month author Ken Howard described Dots-Perfect, a printer upgrade kit available through Dresselhaus Computer Products (800-368-7737). The essentially "free" upgrade offer (from earlier Dresselhaus products) described in this article was in effect for six months after introduction of Dots-Perfect, during which time Ken had upgraded his printer. Unfortunately the offer expired some time ago, but due to very popular demand, Dresselhaus has advised us that EW readers can now obtain the Dots-Perfect upgrade at a very substantial discount. When calling Dresselhaus, be sure to mention Epson World to get your price.

MENUS AND OTHER WAYS TO MAKE YOUR PROGRAMS USER-FRIENDLY

By Ken Howard

User-friendly . . . The term is bandied about a lot these days. It seems that everybody's software is "user-friendly." In reality, most programs range from "user-condescending" to "user-indifferent." And a few are downright "user-hostile."

So what is this user-friendliness thing? And how can we set about making our programs more user-friendly? What follows is a description of the concepts and a step-by-step procedure for adding "friendliness" to your computer programs. Although my demonstration program "SuperFont" is written with the QX-10 and RSI-Basic in mind, the concepts are readily transferable to other computers and programs.

SuperFont is a simple program that sets your Epson printer font and print controls. It is meant to be a demonstration program to show the patterns involved with menuing. If truth be known, SuperFont is "menued" to death since all of it's selections could easily be displayed on a single screen, entirely avoiding all the menus described, but ruining the program as a training vehicle.

(Ed note: SuperFont source code (in RSIBASIC) plus a compiled version that runs under Valdoc's MENU key are available on a disk directly from author Ken Howard for $15. Those wishing only a hard copy listing (8-1/2 pages of it) should send a SASE and $1 for postage and copying. Ken Howard, 7909 Valencia Road, Chesterfield, VA 23832. The numbers in parenthesis throughout the remainder of this article refer to line numbers in the program source code listing, which, due to its length, was not printed in this issue. - jim)

What is User-Friendliness?

A computer or computer program is nothing more than a tool. When you go to pick up a hammer, for instance, it should be obvious which end is the handle, and you shouldn't have to think about it. Likewise, when you use a computer to solve a problem (or accomplish a task), you should be able to apply most of your efforts toward defining and solving the problem, not figuring out how to run the program.

This is why the QX-10 has plain English function keys, like STORE and RETRIEVE rather than F1 or F2. The two most popular keys--HELP and UNDO--have begun to pop up on other computers. Other computers use ICONS (ICotic representatiONS) to the same end.

But user-friendliness is more than a sensible set of function keys. It boils down to a set of principles that can apply to any program. These principles are illustrated SuperFont, a relatively simple printer font manipulator that has the distinction of being more user-friendly than all its competitors. The program is written in RSIBASIC so you can examine and change it if you like.

Principles of User-Friendliness

Programmer, Know Thy User. Before sitting down to write your program, give some serious thought to the intended users. How sophisticated are they? Are they likely to be tech weenies, computer illiterates, or something in between? Use the K.I.S.S. (Keep It Simple, Stupid!) principle. Make sure that your screen instructions are transparent to the least sophisticated person likely to use your program. By the same token, don't alienate your more sophisticated users. Build flexibility into your program by allowing more experienced users to eliminate keystrokes or avoid stifling menus.

For example, SuperFont is preset (310-350) for normal menu selection, so that beginning users must first move the cursor to the desired menu option, then select it by pressing RETURN. This two-step process reduces the number of errors an inexperienced user might make. However, more experienced users can reconfigure SuperFont (960-1410) to enable "single key menu selection", so that pressing the first letter of the option automatically activates it. This reduces by one-half the number of keystrokes required.

Go with the Flow(chart)!

User-friendly programs follow a logical and consistent flow. By logical, I

mean that the overall order in which the program attacks the task makes outward sense (e.g., first things first). By consistent, I mean that subroutines in the program follow parallel paths. This requires thoughtful consideration and planning. Many programmers find it helpful to outline their programs in a flowchart, and actually draw in roughed-out menus at the decision points. Think how you would attack the problem without a computer, then write the program in that order.

SuperFont starts by displaying a title screen (120-280) which includes: title, author/publisher, copyright, and--an important item for "freeware" program--where to send the money. Next comes the Main Menu (360-710), from which the user can either: (1) reconfigure program default values or (2) go directly to manipulating printer fonts.

This takes the user to the Font Selection Menu (1420-1790), where the user can manipulate: (1) style, (2) pitch, or (3) weight. All three of these subroutines follow parallel paths, offering a variety of settings, then return to the Font Selection Menu. At any point the user can press UNDO to back up to the previous menu. STOP returns to the Main Menu.

One From Column A . . .

Menus should be designed so that they are both internally and externally consistent. Internal menu consistency means that all menus within the program use a similar structure. External consistency means that if your program is designed to integrate primarily with an another existing program, menu structures must be similar throughout both programs.

SuperFont's menus are internally consistent and they are designed to be externally consistent with Valdocs menus.

Menu choices should be comprehensive and mutually exclusive. Comprehensive means that they offer the user all of the logical choices at the decision point in question. Mutually exclusive means that each choice is displayed clearly and distinctly, to avoid confusion with other choices. The first letter of each choice should be different from the first letter of the other choices, so that you can make selections by pressing the first letter of the choice.

Menus should include not only a set of choices, but a few well-chosen words of instructions which briefly describe the action required at this decision point. Menu wording must have only one meaning, regardless of the experience level of the user. Correctly written menus are not child's play to write.

Use special "Toggle Settings" when appropriate to save disk space and execution time. When a menu choice would logically lead to a second YES/NO or ON/OFF menu, substitute a toggle setting in the original menu. This allows the user to change the setting by merely pressing RETURN. This is often useful in "Setup" or configuration menus.

SuperFont's Configuration Menu (960-1290) makes use of a toggle setting (1230-1290) to select single-key menu operation.

Bells and Whistles

Bell-tones and special visual effects (e.g., blinking characters, bold or extra-large fonts, etc.) can often be helpful to the user, but overuse can be disconcerting, tiring or downright obnoxious. Use bells and visuals when you want to bring something to the user's attention that is out of the ordinary.

You might use a bell to warn the user that an important or potentially hazardous operation is about to begin or announce when a job is finished. Or use it to bring attention to user errors. You might use bold, oversize, and/or blinking characters to emphasize an important block of information. During time-consuming operations, you might flash an occasional "WORKING . . ." or tick off a number on the screen to let the user know that the program is still working on the task and not merely dead.

For example, SuperFont uses bell-tones (650, 1200, 1730, 2200, 2760, & 3330) to notify the user when an incorrect keystroke has been made. It also uses bold in menus to emphasize function key names and a combination of oversize characters and special fonts to bring attention to the title screen (120-170).

Help!

A critical aspect of user-friendliness is on-screen help for the user. Good documentation is not enough because most users don't read it, and those that do can't remember it all anyway. The software engineer must support this failing by providing immediate access to additional instruction at all menus. Think through help text carefully. It must be brief, yet complete. Help is one thing, eating up all your disk space is something else. A balance has to be made.

On-screen help should (1) describe the decisions available to the user at the current point in the program, then (2) explain what each menu choice means. Including any necessary steps that follow. If the help text for any menu is long (more than one screen), don't force the user to read everything. Provide escapes out of the help text at every screen. As with menus, make sure all screens are consistent with each other.

SuperFont's Main Menu help text (720-950) consists of two screens. The first (720-860) explains the general purpose and operation of the program. The second (870-950) explains each menu choice. At the end of the first help screen, the user may press UNDO to return to the menu or any other key to continue with help text (840-860).

Smoke Test It

After you think you've made your program so user-friendly that a fool could use it, find some fools to try it. This is called Beta-Testing. Having worked with the program for so long, you become "blind" to many mistakes in menuing and textual wording. A

worked with the program for so long, you become "blind" to many mistakes in menuing and textual wording. A user unfamiliar with the program can spot these quickly.

What's Up, Doc(umentation)?

Large user manuals make great doorstops but poor reference guides for the user. There are of course limits, but generally, the shorter the user guide, the better it is written. User-friendly documentation should have sections devoted to: (1) Table of Contents, (2) Introduction, (3) Step-by-Step Instructions, (4) Tutorial, and (5) Index (for longer manuals). If appropriate, you'll also want to include a section that describes any special hardware requirements and installation procedures.

The Table of Contents includes the titles and page numbers for major sections and subsections of your manual (use the exact same wording as in the body of the manual). Do this section last. This section is important: without it your manual is more like a boring novel than a reference guide.

Step-by-Step Instructions should be detailed but concise, walking the user through the various menus, choices, and subroutines. Illustrate this section with actual menus from your program. For best result, outline before you start writing.

The Tutorial section presents typical tasks/problems and shows how to make use of the program to solve them.

Indexes are only necessary for manuals that are either very long or very complex. The most common index schemes are: (1) Subject and (2) Key Word Out of Context (KWOC). KWOC indexes are the easiest. Simply pick important words and use the search capability of your word processor to locate the pages on which they appear.

The GREAT EPSON QX-10 and QX-16 SOFTWARE GIVEAWAY!

Absolutely the lowest prices in the country! Quantities are Extremely Limited! This is your last chance to get software written expressly for your Epson QX-10/ QX-16 Computers!

PeachTree Accounting Reg. $2380 — **Now $149.95!**
(4 Pack GL, AR, AP, Payroll)

Accounting Partner Reg. $395 — **Now $99.95!**
(Star Software)

HASCI DBASE 2 Reg. $495 — **Now $79.95!**
(Ashton-Tate)

HASCI WordStar Reg. $350 — **Now $69.95!**
(Micro Pro)

HASCI Friday Reg. $295 — **Now $49.95!**
(Ashton-Tate)

PeachText 5000 (PeachTree) Reg. $295 — **Now $37.95!**
(Peach Tree Word Processor, Spelling Proofreader, PeachCalc, List Manager)

HASCI SpellStar Reg. $250 — **Now $34.95!**

HASCI GraphPlan Reg. $295 — **Now $34.95!**

PeachPak 9 Reg. $295 — **Now $34.95!**
(Word Processor, Spelling Proofreader, PeachCalc, Mailing List Manager)

Mini-Ledger (Oakwood) Reg. $129 — **Now $29.95!**

PeachTree Mailing List Manager, Personal Calendar, Telecommunications, **Your Choice:** — **Now $8.44!**

CP/M 2.25B — **Now $14.95!**

Acorn Publishing Software (Very Limited Supply!)

Logo Professor Reg. $100 Now $24.95 Reading Professor Reg. $50 Now $19.95
Typing Professor Reg. $50 Now $19.95 Math Professor Reg. $50 Now $14.95

Acorn Game Closeout!

Star Destroyer, Underground City, Convoy Attack, Bumper Cars, Laser Tanks, Falcon Adventure **Your Choice:** — **Only $8.44 !**

Comrex CR-103 Modem Reg. $179.95 — **Now $39.95!**

C. Itoh Model 15 Printer

Wide Carriage, 160 cps draft, 32 cps nlq; Friction Feed, Tractors (included), 8 kByte printer buffer, Centronics Parallel Interface. Brand New in factory sealed cartons!

Lists for $699; **Giveaway price: Now $339.95**

Minimum Prepaid Orders: $50. Credit Card Order Minimum: $100 . Add 3% for Credit Card Sales - Allow 3-4 Weeks for Personal Checks to Clear. MasterCard, VISA and American Express Credit Cards Accepted

Electrified Discounters, Inc.

996 Orange Ave. - PO Box 151
West Haven, CT. 06516
203-937-0106

When you're done, have at least 2 people proofread your program: 1 computerphile and 1 computerphobe. Use the 'phile for content accuracy and the 'phobe for clarity.

And Now, the Slow-Motion Replay

Use these steps to develop user-friendly programs:

(1) Assess user sophistication level.

(2) Study the problem (or task) the program is supposed to solve (or perform).

(3) Settle on a standard (or at least logical) approach to the problem/task as a model to work from in designing your program.

(4) Flowchart your program, using roughed out actual menus at decision points.
(5) Build (and test) your program one module at a time (including help screens).

(6) Assemble the modules and retest.

(7) Smoke test the program by letting a computer-illiterate try it.

(8) Write your documentation, keeping in mind your intended user audience. (Remember to outline it for continuity first.)

Follow these guidelines, and you'll be certain your users can use your program without you having to tell them how, like over the phone on weekends!

Tech Tip

By Fritz Schaller

When using the printer setup in Valdocs and you want only a temporary change in the settings, UNDO out of SETUP after they are changed rather than pressing STORE. This will leave the settings previously STORED in place for the next time Valdocs is initialized.

The Battery Problem in Epson Computers

By Jim Hansen

Many of the QX-10 computers in our community are approaching their fourth birthday, and here at Epson World I'm hearing a lot more about "battery" problems. There is also a bit of mis-information about NiCad batteries going around. Here is the story on that.

We can probably thank our space program for making NiCad batteries the practical invention they are today. First used in early satellites, they have found their way into electric shavers, hedge trimmers, battery powered electric mixers and almost anything battery powerable.

There are several factors that make the NiCad battery uniquely practical for consumer (and space) applications. They can take a lot of charging cycles, they are sealed and virtually never leak, and they pack a lot of energy per pound. They'll also take a lot of thermal abuse, and are very reliable.

But they are completely different from the lead-acid storage batteries in your car. One of the worst things you can do to a NiCad battery is treat it like you do your car battery.

NiCad Memories

Lead-acid batteries generally like to be maintained in a fully charged condition. They prefer "shallow" discharges, and if you ever fully discharge them, chances are they'll never be the same.

NiCad batteries, on the other hand, are almost the opposite. When kept "topped off" and fully charged, they loose potency over the years. In fact, if you generally use the same amount of energy then immediately recharge the battery, time after time, a "memory" develops and eventually the battery won't be able to provide more power than the "standard" discharge cycle it is used to.

The condition can get so bad that a battery powered shaver, for example, will discharge in one shave. Typically the battery will be replaced when it starts doing that, but in many cases it can be saved by running it completely down, leaving the load turned on over night, then charging it up again, and repeating the process as many times as necessary to regain full or nearly full capacity.

This process is nothing more than "re-educating" the battery, developing a new memory for the full chemical capacity of the unit, but generally people find it easier to simply get a new battery instead.

QX Battery Problems

QX owners are starting to complain more frequently about the CMOS memory being corrupted, and tend to blame the battery for the problem. While this could be true, EW hasn't received any complaints about the calendar-clock settings going west when the corruption took place, so chances are good that most of the time the problem rests elsewhere.

Some versions of CP/M can alter CMOS memory, so if you are having CMOS memory problems, rather than immediately blame the battery, recall what your last system usage was. Were you using CP/M since the last time Valdocs was initialized?

Valdocs + III spell checker crashes can and often do change CMOS memory. If your system has crashed and the CMOS memory was bombed, once again the chances are that the battery was not at fault.

Battery Options

Let's say that your QX battery is truly dead. Your CMOS memory is getting trashed along with the calendar-clock settings after the system has been turned off over night. What to do?

Choices are simple. Live with it or fix it. If you've decided to live with it you'll have to leave the computer turned on around the clock or re-initialize the system every time you start it up. What a drag.

Fixing it gives us four options. You can go to your friendly Epson supplier who might be able to get you a new battery in a couple months (am I pushing it?) for anywhere between $45 and $75. Almost as bad as buying a muffler for a Subaru.

Or you could call around to all the local (and long distanced) electronic distributors and try to find a direct Sanyo replacement, but chances of this are grim. The battery you are after isn't common. And even if you do find it, you'll still have to cut the wires off your old one and solder them on the new one. What a drag.

The Simplest Solution

Probably the simplest solution is to send a check for $23.50 to MEUG Vice President G. A. Conger, 701 Wayland Drive, Arlington, TX 76012 before March 31, 1987.

His user group is placing a large order for Sanyo direct replacement batteries with the connector and all attached and will send yours in April by US Mail if he gets your check in time.

If you decide to order through MEUG **do it right now** (today!), and make darn sure you include your name, address and telephone number! Make your check out to MEUG.

Installation with the direct replacement is simple: Unplug the old one, plug in the new one. (The computer may need to be left on for a day or so to charge up the new battery.)

The Cheapest Solution

For you do-it-yourselfers, there is a cheaper alternative. It isn't difficult, and you'll find everything you need at your local Radio Shack Store.

What you want to buy are four of their AA rechargeable NiCad pen light cells (you only need three) and a battery holder (catalog number 270-391) which takes four AA cells and has color coded leads. Wiring is simple, just cut the wires off the original Sanyo battery and solder them to the matching wires from the battery holder.

Next you'll next need to jumper one of the four battery positions in the holder, since only three batteries are used. You can do this by soldering a jumper wire across any battery position or by carefully cutting a wooden dowel the size of a battery, wrapping it with a single piece of aluminum foil and installing it in the holder along with the other three "real" batteries.

Use a meter to verify that you have 3.75 volts across the red (positive) and black (negative) wires. This is a tad (.15 volts) higher than the original battery voltage, but no harm will come.

Plug the connector from the new battery assembly into the mother board and lay the battery holder in any convenient place. You can tie in place if you like, but there is no real need provided you don't ship the computer.

The cost of this operation is about $9.00 for the set of 4 batteries (only three needed, remember) and 89 cents for the holder. No telling how long this setup will power the memory, but it should be totally usable, and it is cheap. Cheap is wonderful.

If You've Missed the Boat

And didn't order your battery from MEUG in time, you can still buy replacements from **SnyderScope** or **Star Technology**, two of our loyal advertisers, at prices below that of Epson. Call them for more information.

DISCOUNT DISKS

5¼" DS/DD 59¢ BOXED WITH TYVEK SLEEVES, LABELS, TABS, HUB RINGS

NOW AVAILABLE IN SIX COLORS, GREEN, RED, LIGHT OR DARK BLUE, MAROON OR GREY AT NO ADDITIONAL CHARGE. CERTIFIED ERROR FREE AT A STUNNING 75% ABOVE INDUSTRY STANDARDS. ITS 10 MIL JACKET IS 25% HEAVIER THAN ALL OF THE MAJOR BRAND JACKETS. THE BEST DISK WE SELL AT ANY PRICE.

Shipping $3 per hundred or part, APO, FPO, AK, HI, & PR add $6. Visa or Mastercard orders under $50 add $2. Orders under $30 add $3 serivce charge. Money orders, cashiers checks, and personal checks earn a 2% discount, but personal checks delay shipment for up to 14 days for clearance. New Jersey residents add 6% sales tax. We ship COD cash or certified check only for a $3 charge. Quantity discount 1%/300, 2%/500, 4%/1,000.

VISA MasterCard

GREEN TREE COMPUTER SUPPLIES

P.O. Box 249
11 Osage Road
Rockaway, N.J. 07866

(201) 627-9472
(800) 367-2897

Maintaining Your QX-10/16

Here it is folks, an unabridged rundown on how to field strip your favorite computer and clean it up. The procedures outlined here, while written for QX computers, are applicable to all systems. Permission is granted to both individuals and user groups to copy this article for personal, non-commercial use. You asked for it, you got it. Good luck!

By Jerry Conger

The need for cleaning your computer (CPU), disk drives, keyboard, printer, was the subject of recent UG meetings at the CEUG and MEUG. Some forty Epson computers were thoroughly cleaned during an instructed (by the author) do-it-yourself session and we claim to have the cleanest QX's in the U.S.A.!!

In an attempt to document the frequency and need for such cleaning sessions I also published a paper which categorized users into three groups and suggested a time table for performing a cleaning operation on each item. *(Ed. Note: We'll publish Jerry's paper in a later issue.)*

There is a certain hazard following a step 1, step 2, etc. procedure as little details which need to be shown are difficult to describe. The following steps pertain exactly to the QX-10 and with but little effort can be used on the QX-16. Be careful in handling the components; they are very durable and NORMAL handling will not damage them. The first time through the procedure will take you about 1 hour; the second time, about 1/2 hour.

After all this has been successfully accomplished you can charge yourself, your wife's budget or your Company, a cool $75.00, and sometimes much, much more depending upon the honesty of your computer dealer.

Three very important "firsts" must be observed: 1. Always put the cardboard disks supplied with the computer or (or use some old disks if you've already trashed these) into both drives and push the load button before moving the CPU.

In this exercise you will be moving the drives around and the heads must be protected from bouncing around and getting out of alignment. Loading a disk or the cardboard protector is the best way to prevent costly repairs that might result otherwise.

2. Watch out for static. Ground yourself. How? Many ways; Buy the static grounding wrist band and clip to a KNOWN grounded condition. The idea is to bring any static potential on your body and the computer to the same level. The best possible situation would be to work on a metal table on a metal floor!

3. Move the computer out of a wool or fluffy rug carpeted room into a tiled area. Still best to ground your body to the computer frame ground.

You'll need the following tools:

A. Phillips screwdriver, use a medium size, not a small one as you might strip the screw heads.

B. Regular screwdriver (flat blade), medium size.

C. Q-Tips, about five, more if real dirty.

D. Soft brush about 1" wide.

E. Vacuum cleaner, the small rechargeable, portables one work the best. I have a MINI-VAC which weighs 4 1/2 ounces and runs off a rechargeable 9 volt battery and easily fits in my shirt pocket - especially good for cleaning between the keyboard keys.

F. Disk head cleaning kit, suggest the wet type in any NAME brand.

G. A little dish to hold all the parts (mainly screws) removed.

Into the Breech

Everyone ready? Please read each step completely before execution. I've included certain cautions or tips to aid in the step to be performed.

Step 1. Place the computer on a table with the disk drives toward you and with enough space behind the computer to accommodate the top half which you'll remove and roll over, away from you, behind the bottom half.

2. Disconnect everything from the CPU case (the part with the 2 drives). Especially remove the power cord. This now should be a COMPLETELY isolated CPU; no keyboard no monitor no nothin'.

3. Put the cardboard or scrap disk into the two drives and close the door. No exceptions.

4. On the left rear, remove the 2 screws holding the accessory bay cover on.

5. Remove the accessory bay cover. If you've never removed the black steel plate (only for shipping purposes covering the opening of the back side of the slot area), do so now. It is usually held in place by two screws through the steel plate into the CPU body. I suggest storing this plate, but do not put it back as it interferes with the inserting of cards (boards) like the Titan and CR-103, etc.

6. Be certain you are well grounded for static conditions and remove any accessory boards you have previously installed in the slots. Sometimes they are tight and require a gentle rocking motion FRONT to BACK (not side to side) to loosen the connection. Set them aside on a non-metallic surface or wrap them temporarily in aluminum foil.

7. On the TOP right side of the box, you'll see two tabs, one toward the front and one toward the rear, about 1/2" square. These can be removed by placing a small flat blade screwdriver under each at an indentation provided for that purpose. Gently pry up and the tabs will pop out, exposing a phillips screw at the bottom of the well covered by each tab. These hold the top and bottom halves of the CPU case together.

8. These two screws are to be unscrewed. They are quite long and take a lot of turning. Unless you have a magnet, it is not possible at this point to remove these screws just yet, so we'll get them later. Just make certain they are completely unscrewed.

9. At the top, left side (but just right of the open slot area) you'll find two more screws holding the two halves (top and bottom) together. Unscrew AND remove them.

10. Now, follow closely. Look into the slot area along its left side toward the rear, you can just see two connectors containing many wires in a flat array. The one furthest to the rear is black; the one toward the front is white. With the top half of the computer still in position, you will disconnect these two connectors. The black one first, this is the easy one. Observe that the black connector seems to have a little wings at the top of each end. Press down gently and simultaneously on these two wings and the connector will pop up a little bit, freeing it for easy removal.

11. Now the white one. You all know that you do not pull an the wire to remove a plug from a wall plug. Rather, you should firmly grip the rubber (plastic) plug at the wall and then pull. The reason is that you do not want to pull the wires out of the plug. The white one has about ten wires coming out, loosen one of these wires and the repair will NOT be easy. All the caution because there is but minimum space to get your thumb and forefinger on either side of the white connector. Struggle a little tilting it front to back, gently, and it WILL come off.

12. With both black and white connector removed and the 4 phillips screws loosened all the way (two of which have been removed) you will be able to pick the top half of the CPU straight up, but ONLY a couple of inches, and slide it back, exposing the loud speaker near the front on the left side. Remove the phillips screw holding the ground strap on the loudspeaker.

At this point, the top of the computer case is completely free. Place it up side down behind the computer, catching the two case screws mentioned earlier as they fall out. Take some time and look around the computer.

What a bunch of chips! Now's a good time to identify some of the components. You'll need the Epson Technical Manual to do this or else refer to the pictures in Jim Hansen's Book, The Epson QX-10 User's Guide, available through EW.

13. The smaller (video display controller) board positioned about an inch above the large (mother) board is to be removed next. Are you well grounded? (Touch one f the power supply heat sinks or touch the metal cover on the video controller.)

Four screws will be removed, each should have a small lock washer under its head. Do not loose them. Three of the screws are located as follows: Two on the front side, extreme left and right. The third is at the back left corner. The forth (I call it the warranty screw as it has some red dope on it which must be broken to remove the screw) is a little harder to turn. With no screw driver slipping to damage chips, remove this last one.

The board is now loose from its stand off posts but still connected to the mother board by two, almost invisible connectors. These are located toward the rear and right of the board.

So grasp the board with two fingers of each hand places at the right and left sides of the board and gently lift upward rocking from side to side (not front to back) and the board will finally come free. Set it on a non-metallic surface or wrap in temporarily in aluminum foil. Wow.

14. On the front of the video board, just removed, you'll see a silver colored, aluminum shield held on by two nuts and bolts, each with two lock washers, top and bottom. Remove these two screws and for safe keeping, screw the nut back on the screw along with the two washers.

15. The top half, up side down, at what would be the front, you'll find two inlet air vent openings which are covered by a grill structure. These are found just to the right and left of the drives. Q-Tip clean these little openings obviously so as much air as pos-

sible will be passed through to cool the innards.

16. The black fan is easily identified, attached by four screws to a black steel plate on the back wall of the bottom half. The two bottom screws are a little difficult to get at, so be careful of surrounding chips and other components. They are a little tight so be careful and remove all four.

There is a lock washer under the head of each screw, do not loose it. As you take out the last screw the fan will come away free except for its three wire connector. Look at this connector from the top and you'll see, on the left side, a little slot. You must stick the flat blade of your screw driver into this slot to unlatch the latch. Now the connector is easily lifted off. If there is resistance, it is still latched.

17. As the fan is removed, a stainless steel screen is freed. Next, look carefully at how dirty this screen is, then throw it away. **Leave it out when reassembling.**

18. I like to lift the power plug-in (in the back right corner area) and the main ON/OFF toggle switch found on the right rear corner to give better access for cleaning. Observe how they come out and it will be easier when replacing them.

19. Use the Q-Tips to clean the fan blades, inside and out, its housing, and its black steel mounting bracket still remaining on the box at the back. Also Q-Tip the area of the power plug and toggle switch which you can not easily reach with the vacuum cleaner. *(Ed Note: I usually take the fan to the kitchen sink and hose it off. Just keep it oriented so water doesn't go INSIDE the motor.)*

20. The board mounted in a vertical position at the right side of the box is the power supply. Clean the area between it and the right side of the box with Q-Tips and apply the brush and vacuum to this area.

21. The mother board and the chip side of the video board should be facing you. Both sides of the video board and the top only of the mother board should be brushed and vacuumed. Do a good job, but don't brush the dust under a chip! Vacuum carefully so as not to topple a transistor or resistor sticking up and attached by two tiny wires. Clean it good, the dust sticks tightly to the top and around the sides of the chips.

22. That's it for the brushing and vacuuming.

23. Before re-assembling, take a look at the drives for future reference. Through and oval opening, you can see the "rubber band" drive belts. These will eventually wear out. You can replace them.

24. Look at the back of the drives and see the four dip switches on each drive. I mark the switch position right on the anodized steel casing of the drive (just above the dip switches) with a black felt pen marker, showing, with either an up or down arrow, the switch position. Might need to know sometime when changing drives. *(Ed Note: If you can't bring yourself to mark up the disk drives, stick a label on the drive and mark that.)*

25. Just to the left of the power supply board, about half way back is a yellow cartridge about 1/2" in diameter and about 3" long, connected by two red and one green wire to another plug and socket.

This is the "clock battery" (or more correctly the CMOS backup battery). The time is always visible on screen as long as this battery is charged. It is kept charged by running the computer about an hour a month. If you loose the time or the ability to "boot up" this is the likely cause. This rechargeable NiCad battery has a shelf life of about 3-1/2 to 5 years.

The battery is snugly held in place by two plastic wire wraps. It can be removed by jockeying these straps over the battery. First you must disconnect it by pulling up on the blue connectors. Once you do this it will be necessary to reset the computer clock through the setup menu.

The several chips with the little silver or black patches (patch size about 1/4" square) are the ROM chips. The one on the video board is the Character Generator. You can see the many duplicate "memory" chip on both the video (128K) and mother (256K) boards. Chips in a "socket" are quite easy to remove. Meaning, if you knew which one was bad, you could change it yourself. Do like some dealers do, take a known good one and by trial and error find the bad one.

Occasionally the fan will fail, you know where it is located and how to remove it. *(Ed Note: you won't like the price of a new one.)* It is MOST important that the fan be running and passing air freely to keep the power supply from becoming overheated. A potential $200.00+ repair bill.

26. OK, now put it all back together, in reverse order.

27. Profit from experience - Of the some forty computers handled in this fashion, we've had no losers. However, I did have five telephone calls, "Something is wrong with my computer, it will not boot up".

I said, "OK, open up the box and make certain the plugs are properly aligned with the socket AND that they are BOTTOMED, meaning fully down. And, please call me back when you have checked this" All five called back and said "mission accomplished, all is A OK". Be alert to this potential problem. Check all connections as you put them together, push them gently but firmly together. Remember the two wings on the black plug? You now must lift them up (they will snap into place) to anchor the black plug.

28. When closing the box, locate the halves squarely, the top over the bottom half, when lowering so as to not

bump a component. Be certain the two left multiple flat wire connectors are not twisted, they must go back onto their plugs, the same way they came off.

29. Let's look at the keyboard. Lots of dust collects between the keys. Brush and vacuum. Depending upon the model of keyboard, there seem to be four different models, you can remove 6 or 8 screws from the bottom side permitting the board to be opened. Again, brush and vacuum. Reassemble.

30. While you are in the mood, clean the pretty gray external surfaces of the computer, keyboard and monitor with a little mild detergent on a damp cloth and dry thoroughly. Do not use Windex on the monitor glass front, only a clean damp cloth is required.

31. I think you have it. When re-assembled, reconnect everything, remove the temporary disks from the drive and prepare the disk cleaning diskettes according to the instructions on their package. Instructions will tell you to run the drives for "x" seconds. Longer is NOT better, follow the instructions that come with the cleaner.

To engage a drive for cleaning, it must be the default drive. Of course the A: is such when you first turn the machine ON. The drive is running if its red light is on. Time it adding up the time the light is on. It will be necessary for you to call the B: into default with any of the 3 operation systems. If you get and error message, simply press the "R" to Retry, counting time the B: red light is on.

32. Printers are often neglected. The biggest hazard is from paper dust which is very abrasive especially damaging to the small plastic drive gear train found in the front left corner of the print head area.

With the power OFF and the front lid removed (a simple pick-off item), the print head can be pushed with your finger either left of right without damage. Do so and vacuum up all the paper dust especially around the plastic gears on the left side. Vacuum your printer whenever you can see an accumulation of paper dust; say, once a month. *(Ed. Note: if you are sick of ribbon ink on the hands, use WD-40 available at hardware stores to clean it off. Dissolves ribbon ink instantly.)*

33. A couple of tips. I have heard that you can spray the insides with a special anti-static material available in spray cans exactly for this purpose. I do not use it as I feel that all surfaces should remain dry, free of oily material including aerosols which are greasy. One tip which does sound reasonable is to spray the carpeting with Downy, the stuff you put into the laundry for anti-static clothing clinging conditions. Sound like good advice although I do not do it. (Ed. Note: I agree. Never spray gunk inside your machine. No telling what it will do to the disk drives/heads.)

34. All sorts of anti-static devices are around to place under your computer, under your desk chair, on your keyboard, to put on your wrist and to carpet the whole room. Your choice.

35. If you have trouble you can reach me anytime, at my condo in Argentina, I'll be out of town for a while, heh, heh. Good luck.

Tech Tip

By Nate Hess

I had about given up trying to run **LOTUS 123 Release 2** on my QX-10 with the Titan board until I remembered running the optimizer utility for the drivers on release 1A.

The trick is to copy the optimized Release 1A drivers onto the Release 2 Utility disk, the run the INSTALL program.

At the Main Menu, select "Advanced Options", then follow the menu prompts to "ADD NEW DRIVERS TO LIBRARY", and select these new drivers during the install routine.

You need a copy of the optimized drivers from Release 1A to set up Release 2 if Release 2 is to run on the QX-10/Titan. If you don't have a copy of these drivers, you'll need to find someone who'll give you a copy of them.

By the way, I keep my CP/M and MS-DOS disks separate by putting a silver write protect tab on the upper right-hand corner of all my CP/M disks. I have more DOS than CP/M disk or I would have tagged the DOS disks instead.

Your Source for EPSON® Computers & Printers.

- Full Service
- Trade Ins
- Consignment Sales Arranged

Computer Connection, Inc.

12 High St., Hampton, NH 03842

603/926-2551

From the Publisher

It's been an interesting month here in New England since last we talked. The Christmas rush is finally over for most of us and the realities of winter are finally being felt. At least at our house.

Your editor had a round with the flu, a particularly good strain to catch. This year the specialty seems to be one that rapidly mutates. The victim can catch each mutation, one right after another, just about knocking out a month before it is all over.

Besides sharing our house with the flu, we now have a chicken living with us. Becky the Bulldog doesn't know what to make of it. You see, one of our hens got her foot caught in the hen house door and all her former friends decided to pick on her. They took most of the feathers off the top of her head before Pat discovered the problem. Naturally this chick became the lowest of the low and her bare scalp a tempting target.

So she now lives in a box in the kitchen, gets lots of yummies and petting from the girls, who last weekend made a chicken diaper so she could explore the house. Becky walks behind her, intently watching. Naturally this is a real riot to watch...a diapered chicken. Give me a break.

I'll give a free one year extension, a copy of my book on the QX-10 and a Disk of the Month (first, second and third prizes) for the best advice on how to re-introduce Lady to the flock (yes, all our chickens have names, and the girls can tell them apart) or how to house break a nine-month-old hen. **Please, somebody, help me!** At least hens don't crow.

We've had quite a bit of interest in and orders for the EW Clone. Yes, the system is real, and yes, those who have it in hand seem pleased with it. We had planned the second installment of the Telecom Tutorial for this issue along with the introduction of two internal modem cards for MS-DOS machines, the EW Clone in particular, but ran out of space.

The modems we've chosen to sponsor are the Leading Edge modems, commonly recognized by most computer stores and service departments. They're good units and briefly described in the Polytronics ad this month.

It seemed appropriate that we run a major article on cleaning and maintenance on the QX machines sometime soon, and with winter keeping everyone inside, what better time than February to do it. I know that it seems like a good thing to really get inside the system once in a while to clean it out, and I don't want to throw cold water on the subject, but here's how I manage my considerable collection of computer systems: **if it ain't broke, don't fix it.**

About the only thing I've done to my four QX-10's since I got them in 1983 is remove the fan screens. I believe that about a year ago I cleaned the heads in one of them. Thought I had a disk drive problem, but it turned out that I'd gotten a bad box of disks instead. They were some IBM-branded disks that were on sale at a good price at a local discounter.

But that's it. Oh, sure, I clean off the CRT screen once in a while and use a little detergent on the case when I can't stand it any longer, but actually open the thing up for a Spring-type cleaning? That's awful close to work. How many of you do that to your TV set or VCR?

Truth is that your bits won't race around inside your computer any better or any faster, regardless of how clean you keep the circuit boards. And believe me, there's bound to be a statistical number of computers that won't work after the cleaning. If you're the statistic, what are you going to do?

By the way, you know those cardboard shipping inserts for the disk drives? I read in a recent newsletter that someone put them in, shipped the computer, then (apparently) destroyed the heads of both drives when removing them. Turns out, the report says, the inserts were "bent".

Avoid this tragedy. Use an old disk. Or a new one. If the insert or disk doesn't pop out by itself, don't force it out. Another piece of "sage" advice: **If it ain't normal, something is probably abnormal.** Check it out before getting a bigger hammer.

QX-10/16 HARD DRIVE
COMPLETE 20 MEG SYSTEM
$995.00
FULL ONE YEAR WARRANTY

COMFILER UPGRADE TO 20 MEG
$445.00

FULL SUPPORT OF CPM/TPM/MSDOS

Comfiler Cast Systems Upgraded
To Comfiler 1510 Compatible

PRO SYSTEMS, INC.
10711 W. 63RD
Shawnee, KS 66203
913-631-2190

NO EXPERIENCE REQUIRED

EASY-TO-USE SOFTWARE FOR EVERYONE

- **HOME MONEY MGR. (HMM)** — The easy-to-use checkbook and budgeting software. Handles check, credit, cash and ATC transactions. 12 check registers, 12 credit registers and 3,000+ transactions per data disk. Split transactions. Printed reports. If you make a mistake, correct it at any time with one of two editors. Plus HMM keeps a full year of financial records on a single disk. Epson World called HMM, *"unusually complete, simple to use, the best I've seen."* $59.95
- **HMM-II** — Increases the power of HMM to include flagging of tax deductible items, check printing, over 900 expense categories, up to 3000 transactions per register, reconcile multiple registers. **$89.95**
- **HOME INSURANCE** — Home inventory and record keeping system. Automatic adjustment for inflation, multiple searches, fast and flexible. **$34.95**
- **HOME LOAN** — Learn the real cost of a loan. Compare interest rates and terms. Includes amortization. **$34.95**
- **HMM PERSONAL ASSET MGR.** — Combines all of the above. **$129.95**
- If other software has been confusing and difficult to use, then try us. We've built our reputation on making quality, easy-to-use software.

NICKELODEON SOFTWARE - P.O. Box 974, Tualatin, OR 97062 • (503) 692-3732
Please add $2.95 S&H per order. VISA, MC or check accepted.

Finnegan's Annex

Wanted - Titan Ram Disk, Printer Buffer and 256K Expansion Board. Bob Lindborg, 261 18th Ave. NW, Great Falls, MT 59404.

Wanted to Trade - Brand new PC Mouse for Titan 2 QX Board. Kenneth W. Howard, 7909 Valencia Road, Chesterfield, VA 23832 804-276-0929.

Wanted - All back issues of Epson Connection (except June/July 1985). Advise cost, will accept UPS COD delivery. Michael Renaud-Wright, 720 Fillmore St. Santa Paula, CA, 93060.

SEND ME a self-addressed mailing label and a check for $9.50, and receive my 30 page copyrighted KEYWORD INDEX of the 868 page Valdocs+III manual by return mail. Erika Kuelke, 250 Hemlock Terrace, Kinnelon, NH 07405, 201-838-7904.

SNYDERSCOPE INTERNATIONAL

YOUR ONE STOP EPSON SOURCE

WE SELL NEW AND USED EQUIPMENT PARTS, SERVICE AND CONSULTATION

EQUIPMENT SPECIALS!

VALDOCS COLOR MONITOR SWITCH --- $249.95
VALDOCS COLOR MONITOR & BOARD --- $495.95
EPSON CR-420 I (HIGH SPEED PRINTER) --- $795.00
PX-8 PACKAGE DEAL (W/PRINTER & MODEM) --- $495.00
OVAL UD-80++ MONITOR SYSTEM FOR PX-8 --- $329.00
C2P ADAPTER (SERIAL TO PARALLEL PX-8) --- $95.00
STA-BLK SELF-INKING RIBBON FOR 80 PRINTERS--$25.00
CMOS REPLACEMENT BATTERY FOR QX-10/16 --- CALL

RECONDITIONED!

EPSON QX-10 -- $575.00; HARD DRIVES (10 MEG TO 40 MEG) FROM -- $699.00

SOFTWARE!

dBASEII -- $49.95, FRIDAY -- 45.95; WORDSTAR -- 49.95, PEACHTEXT 5000 -- 49.95

THE ABOVE IS ONLY A VERY SMALL LISTING OF ALL THAT WE HAVE FOR YOUR COMPUTER SYSTEM. GIVE US A CALL OR DROP US A NOTE FOR OUR FULL PRICE LIST. WE HAVE ALMOST ANYTHING EVER MADE FOR THE EPSON QX, PX, OR HX SERIES COMPUTERS.

TECHNICAL MANUALS FOR SALE--SERVICE FOR YOUR EQUIPMENT--TELEPHONE CONSULTATION FOR YOUR SOFTWARE NEEDS. CALL FOR FEE SCHEDULES!

SNYDERSCOPE INTERNATIONAL
1594 HILLTOP DRIVE
EL CAJON, CALIFORNIA 92020
VOICE (619) 442-2299 - BBS (619) 442-3789,
MCI MAIL SNYDERSCOPE - COMPUSERVE 76566,2771

Are You Bored Literally Out of Your Tree?

If so, why not trying something new with your computer? Something out of the ordinary.

Here's a neat program that is interesting to play with, won't take you very long to type in, and has some interesting possibilities. Dust off your copy of RSI BASIC and try this programming quickie written by EW's own Mandala expert, Lonny Brown. Then, modify it to suit your pleasure and send a copy to us. You'll earn a free Disk of the Month of your choice when it's published!

```
10 REM Your BASIC Fantastic Mandala in RSI BASIC
20 REM By Lonny Brown
30 CURSOR 0: CLS
40 FOR A = 0 TO 180 STEP .5: LOCATE 320,200
50 TURNTO (A): DMODE 1: DRAW(180):
    LOCATE 320,200: DRAW(-180): NEXT A
60 END
```

You saw it in EPSON WORLD!

Finnegan's Flea Market

Epson World encourages recycling and believes cheap is wonderful. Advertise your new or used whatever here for wonderful prices. Rates are $2 per line (paid in advance, $10 minimum) per classified or $50 per inch for boxed ads.

For Sale - QX-16 + VAL+III $795. Used 6 mo. for personal enjoymnet. All manuals complete. Jim Kochmann (303) 750-3860.

For Sale - QX-10 Computer System, with MX-80 printer, Val+II, VALDRAW, PAINT, various software, books, magazines. Excellent condition, manuals for all commercial software. Call (301) 951-2577 days, (301) 740-1223 eves, EST, or send SASE to David P. Lemire, 9318 Farewell Rd., Columbia, MD, 21045 for list. Will be sold to best offer and will split shipping cost.

PLEASE NOTE CORRECTED PHONE NUMBER: For Sale - New/used QX hardware & software, quantity prices. QX-16 $795, PRO 520 $995, etc. Owen Gorman (901) 744-7033 eves, weekends.

FOR SALE - Student Records & Grades Database Program - Easy to use menu-driven program for recording grades, printing class rolls, scores, grade averages, etc. Extensive editing capabilities, disk maintenance routines and more. Price only $75, checks/mo accepted. Write or call Larry J. Brown, 205-349-5901, 2007 13th St. Tuscaloosa, AL 35401.

PX-8 Portable - Special on the Bantam Instant Access Guides for the PX-8. Two-book set --- Portable WordStar and Portable Calc/Scheduler ---now just $25, postpaid. Roger McConochie, PO Box 8438, Ann Arbor, MI 48107 (313) 995-3452.

Wanted - manual (or copy) for Novation 103/212 Smart Cat modem. The modem is brand new but I can't make it work with the manual. James H. Geddes, 804 North Ave., Zephyrhills, FL 34248.

For Sale - Like new QX-10 with VALDOCS 2.03 and PeachCalc software. Call or write George S. Wallingford, 4015 NW 44th, Oklahoma City, 73112 (405) 946-9193.

For Sale - Back issues of EW including a few of the rare June/July issues. Epson World (603) 487-2500.

1000 Business cards raised

Printed w/logo:
One Color - $17.50 del.
Two Color - $22.00 del.

1000 #10 envelopes, commercial

White, flat corner printed:
One Color - $25.00 del.
Two Color - $32.50 del.

1000 Hi-white wove (20 lb.) bond,

Raised printed:
One Color - $35.00 del.
Two Color - $50.00 del.

DFS computer forms catalog -

hundreds of items. Only $2.00 for postage.

TERMS: Check with order.
Allow 4 - 8 weeks for delivery.

JALCO DISTRIBUTING
RFD #2, BOX 539-2 Norris
Epping, NH 03042
(603) 679-2445

Please Note our corrected phone number. Our prices on hard disk systems for Epson Computers, are hard to beat!
Forrest Micro, Inc.
201-463-7899

TITAN MS-DOS
Available for QX-10 in 256K and 512K. Comrex CR-103 modems. Will beat any previously advertised prices. Limited quantity, subject to available inventory.
AAA Liquidators
714-994-6472

JALCO DISTRIBUTING
RFD #2, BOX 539-2 Norris
Epping, NH 03042
(603) 679-2445

MINUTEMAN 300SS UPS

Fully Automatic Synchronized Sinewave Power Supply with 1 msec Transfer Time.

PROTECTS against: Blackouts, Interruptions, Brownouts, Surges to 100 joules, Spikes. 3-Stage EMI/RFI Filtered Noise LED Display Audible Alarm.

See complete writeup and user report in the November issue of Epson World.

Free! One year extension of your Epson World subscription with each purchase.

$549.00 p&h. Terms: Cashier's or Certified Check, Master Card or Visa. Allow 4 - 8 wks del.

The Epson QX-10 User's Guide
by
Jim Hansen

A fabulous 159 page book that describes every detail of your favorite computer, as well as the complete and only published history of the Epson Corporation. Discover details of your QX-10 never before revealed in such devastating detail! Chapters include topics on software, hardware, MBASIC programming, QX-10 hardware options, and much more, all written in easily understood ENGLISH! Nearly 100 photographs and illustrations!

Originally published at $17.95, now available with or without the author's genuine handwritten signature for only $9.95 (plus $1.00 postage). Order with any Disk of the Month and save the postage.

Epson World Magazine
Box 369 - New Boston, NH 03070

The Dead Horse Computer Company

By Nan McCarthy

A lot of people ask me why we use non-standard 6-inch disks. A great deal of thought, meditation, study, analysis and research went into this decision. Proposals were written. Proposals were rejected. Proposals were rewritten.

Basically our decision to use 6-inch disks comes down to two reasons. (1) It's wicked hard to copy our disks unless you buy our computer system. (And you **know** what happens if you try to copy disks on our system. If you don't know, don't try it. The Alligator goes on a rampage, eating anything in its reach.) (2) This is the Really Important Reason. The person who is responsible for these matters is into numerology, and 6 is his number. We don't like to stifle people's individuality here at DHC. So there you have it--the story of why DHC uses 6-inch disks. And, of course, all our disks come clothed in distinctive DHC gray jackets.

We like to use initials here at DHC. It sounds so high-tech. Besides, it drives outsiders and new employees nuts. It's sort of like having your own language--like back when you were a kid and had secret codes with your friends. (If you're like a lot of techies, you were a nerdy little kid and didn't have any friends. You watched your brothers and sisters have secret codes with their friends. Now's your chance to experience that feeling of belonging that the other kids had.)

In addition to our policy of giving everyone a title (it makes people feel important and bucks up their self-esteem), we try to give our departments Meaningful Names that will instill a sense of pride in our employees. Accounting is Financial Operations, or FO. My favorite, though, is Sales and Marketing, S & M. That one really raises eyebrows.

Well, the "rilly big" news this month is the unveiling of our long-awaited Plain Vanilla computer, of PVC for short. Don't let the name fool you, though. It's a pretty fancy rig, and it does some pretty neat things. Take the

PIPTERM

for the

QX-16!

A quality MS-DOS telecommunications program for the QX-16

This two disk set provides complete documentation (about 64 pages of it!) and a high quality telecommuncations program which has had very favorable reviews in such monumentally respected rags as Byte and others. (Regardless of this hype, PIBTERM *is* an excellent program.)

Operation is simple; just insert the PIBTERM disk in the current drive and type PIBTERM at the prompt. Documentation is equally easy to get. Put the "DOC" disk in the current drive and type "PRINT PIBTERM.DOC", then go out for a beer.

Order your copy of PIPTERM today! Send $20 for the two disk set to:

Epson World PIBTERM
Box 369
New Boston, NH 03070

86TAXES

A public domain disk to help you prepare your 1986 tax return.

86TAXES is a set of PeachCalc/SuperCalc spreadsheet templates that will greatly aid the preparation, calculation, and printing of Federal Income Taxes. These templates are a "snap" to use: just load the appropriate template into PeachCalc (or SuperCalc 2,3, or 4 if you are using MS-DOS) as you would with any worksheet, fill in the blanks, and 86TAXES does the rest!

All forms and documentation are fully updated for 1986 returns. Even if your tax returns are professionally prepared, 86TAXES is an excellent preparation guide and lets you see the effects of various deduction and credit schemes.

Forms included on this disk are:

Form 1040, page 1 & 2
Schedule A
Schedule B
Schedule C
Schedule D
Form 4562
Schedule E
Schedule G
Schedule SE
Schedule W

California 540, page 1 & 2
540 Schedule A
540 Schedule B

This year make paying taxes FUN! Rush $15 for this marvelous disk to:

Epson World Taxes
Box 369
New Boston, NH 03070

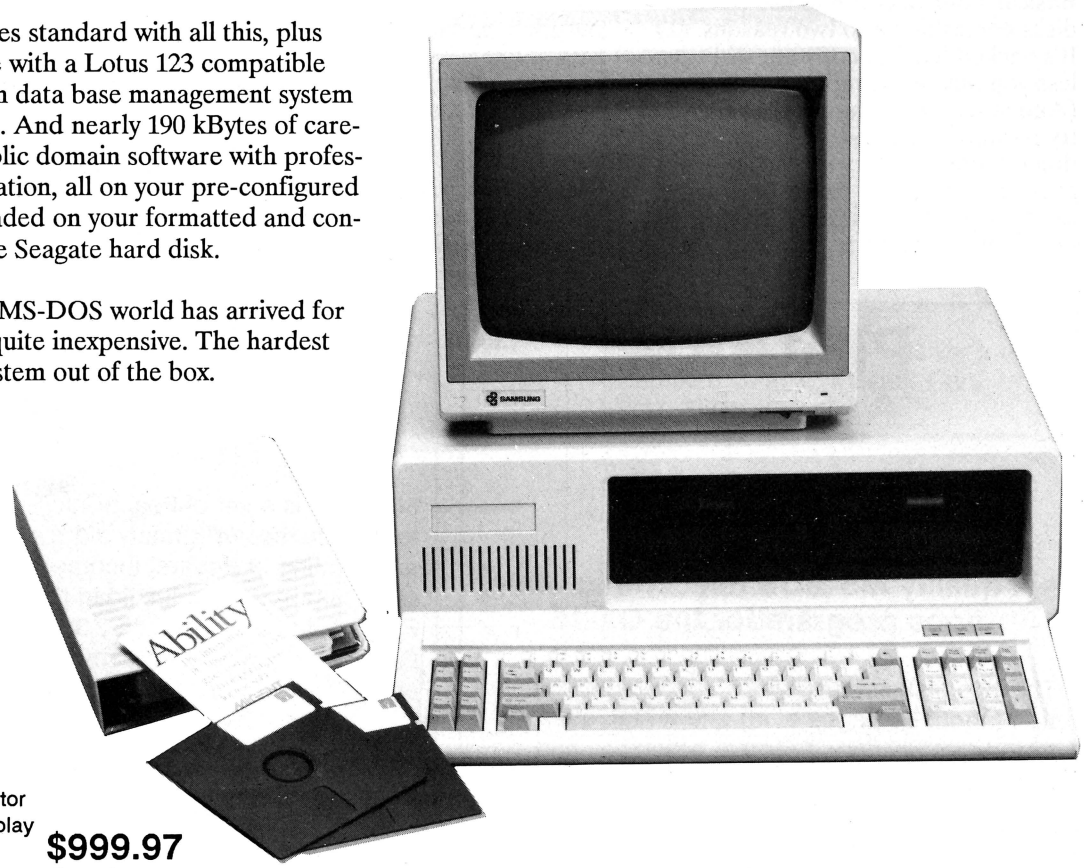
The Official EW Clone

At $999.97, there's nothing else to buy.

Shop around. No doubt you can find MS-DOS systems priced somewhere between $500 and $600. But then you'll have to add extra memory because anything less than 640 Kbytes is becoming minimal these days. And chances are you need two floppies, not just one. And if you want to see what your system is doing, you'll need that "optional" monitor. Oh, yes, how about PC-DOS, the operating system that makes you absolutely compatible? Battery powered calendar-clock? Extra printer port? Can it auto-boot from the hard disk?

The Official EW Clone comes standard with all this, plus the amazing Ability software with a Lotus 123 compatible spreadsheet and full function data base management system that can take dBASE II files. And nearly 190 kBytes of carefully selected and tested public domain software with professionally prepared documentation, all on your pre-configured system floppy diskette or loaded on your formatted and configured optional 20 megabyte Seagate hard disk.

If the time to move into the MS-DOS world has arrived for you, we'll make it easy and quite inexpensive. The hardest work you'll do is take the system out of the box.



Standard Features:

- 100% IBM XT Compatibility
- IBM PC-DOS 3.2
- Memory 640 Kbytes
- Phoenix Bios
- Calendar Clock
- 150 Watt Power Supply
- Two 360 K Floppy Drives
- Two Parallel Printer Ports
- AT Configured Keyboard
- One Serial Port
- One Game Port
- Eight Expansion Slots
- Samsung Amber or Green Monitor
- Hercules Compatible Video Display
- Ability Fully Integrated Software

$999.97
Complete

Options for the EW Clone (and All Other DOS Compatible Computer Systems):

20 Megabyte Seagate Hard Disk Option
With Western Digital Controller **$450.00**

Turbo Option - Nearly doubles the CPU speed
(Keyboard Control - 4.77/8 mHz clock) **$100.00**

Internal Modems, Complete with QMODEM telecommunications software. These are Made by Leading Edge and can be serviced anywhere. First-rate, quality units. Plug the modem card in an empty slot, connect a phone line and installation is about done.

Leading Edge 1200 $129 ($149 List)

Leading Edge 2400 $299.00 ($349 List)

Software Available Separately:

IBM PC-DOS 3.2 $85.00

Ability Integrated Software $70.00

Polytronics Corporation

Box 234 **New Boston, NH 03070** **603-487-2500**

keys, for example. As promised, they're blank. Yep. Every last one of 'em. You can make them stand for anything you want. And for you unimaginative types, you can order--at a slight additional charge--conventional keycaps with letters and numbers, available in 27 languages including Swahili. Our operators are standing by. Use our LAYAWAY plan.

The Plain Vanilla computer is available in 16 shades of white. There's nothing worse than a white that doesn't quite match the other whites around it, so we give you a whole range of appetizing colors, including Vanilla Butter Cream and Marshmallow Fluff. The person in charge of this project weighs 400 pounds and so we told him to "knock himself out" with the names.

For the unveiling, we threw a lavish press party. The entire room was white--white walls, white carpeting, white furniture. All DHC employees wore white--the men in suits styled after "Miami Vice" and the women in long white dresses. We served white wine, white chocolate, vanilla wafers and white creme de menthe. The computer was secluded offstage behind a white curtain. We had fond hopes of getting Vanilla Fudge to make a comeback appearance, but we had to settle for a local punk-rock band instead.

We dimmed the lights as the band went into the opening strains of "A Whiter Shade of Pale" (they did it admirably, though they'll never be Procul Harum). The curtain was opened, and white spotlights illuminated the computer. More than one observer was seen to wipe away a tear at the beauty of the moment. We got rave reviews in the computer mags, and you can have a Plain Vanilla of your very own just by calling our Order Hotline.

A lot of people ask me about our employees because they're curious about the bright lights behind the Dead Horse. We have lots of employees. It's every entrepreneur's dream to have lots of employees, just as it's every entrepreneur's dream to say "I'm an entrepreneur" when people ask that inevitable question of "What are you doing these days?" Why hire one experienced, competent person at $30,000 a year if you can get two dwids at $15,000 apiece--or, better yet, three absolute morons for $10,000 each?

To assuage your curiosity, I've decided to profile a few of our employees. And who knows? Maybe you'll decide you are a likely candidate for a challenging diversified career position at DHC. The bennies are great, too. We give each employee a blank book. The employee and supervisor (actually, we call them mentors at DHC) get together and write appropriate benefits in the book. It's truly tailored to the needs of the individual.

Harvey Dwork is our head programmer. I knew he was perfect for the job as soon as I saw him. He was wearing a T-shirt with pi out to several hundred places and a pair of overalls rolled up as if he were expecting a flood--or perhaps he was just trying to show off his $300, custom-made hiking boots. (No, Harvey doesn't hike; his fishbelly white skin is a dead giveaway that he rarely sees daylight.) The front pocket of his overalls contained six pens in a nerd-pack. He was wearing a flannel shirt as a jacket over the whole ensemble. Harvey gets his hair cut when he can no longer see the monitor of his computer. When you want to talk to Harvey, you have to bring him out of BASIC first. Yessirree, Harvey is a Real Programmer.

Ethel Mayhem is our head shipping clerk. Ethel doesn't ask for much. All she wanted was a quarter an hour raise and a title. We made her Chief Shipping Engineer, and we didn't even have to give her the quarter an hour, she was so happy. Ethel's okay though. She wears unnatural fibers in unnatural colors and still peroxides her hair. Speaking of which, Ethel cuts hair after hours and has her certificate from The Cut-up Beauty School displayed proudly over her worktable.

A-A-A-Alice (well, that's the way she says it) Analog is our bookkeeper. She's a good employee for a high-tech company, because she never wants to finish anything. That goes for the books, too. Fortunately, for everyone involved, A-A-A-Alice doesn't do our paychecks.

Joe Sleezeback, our Director of Marketing, got his marketing experience as a cashier at the local supermarket. We feel he's well-qualified, and, besides, he works cheap.

These are just a few of many. We're all family here at DHC. And remember, if you think you have what it takes to be a Dead Horse, send your resume to HFD (that's Human Fixtures Department--human resources get used up, fixtures last a long time) and we'll be in touch...real soon now.

New and Reconditioned Epson QX-10 Computers!

NEW SYSTEMS COMPLETE WITH VALDOCS, CP/M AND FULL 1 YEAR WARRANTY!

QUANTITIES ARE LIMITED

Reconditioned QX-10's are in like new mint condition with a 60 day warranty. Disk drives are completely cleaned, belt tension adjusted, heads aligned and calibrated, disk ejector cleaned and lubed. Our QX's go through a 43 point check list before they are offered to you. Prices vary depending on condition.

QX-10 CPU and Disk Drive Reconditioning

Full CPU reconditioning $229; Disk Drive Reconditioning $80/Drive. CMOS Battery Replacement Kit $28. Complete QX-10 service available at reasonable prices.

Star Technology Corp.
900 170th Road
Carbondale, CO 81623

EPSON COLOR MONITOR

MODEL Q804A

Suggested Retail

~~$1595~~

CLOSE-OUT

Sale Price

$499.95

The EPSON Color Monitor is a precision engineered product designed for use with the computer system which outputs an R.G.B. Separate video signal.
Solid state electronics used in this Color Monitor provides improved reliability and superior performance even in continuous duty applications.

LESS THAN 100 IN STOCK

EPSON COLOR MONITOR
(Q804A) w/Sub-Board for QX-10/16

VISA MasterCard

International Trading Corp.
2029 Century Pk East, Suite #2690
Los Angeles, CA 90067

CALL NOW! **(213) 277-1396**

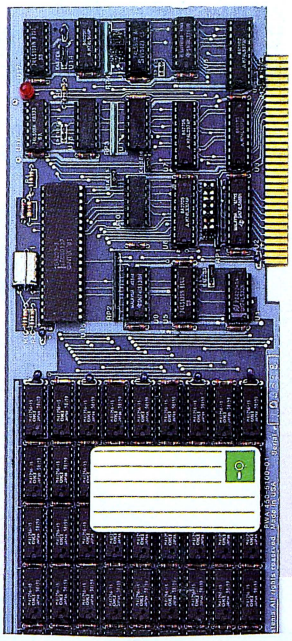
While–They–Last!

Think fast! Pick the better fit...

Our 5th Year Bonus! Mention this ad when ordering and get your choice of a V 20-8 (replaces 8088) or $20 off on your Battery Backup purchase!

FLOPPY DISK.

- Fills time between coffee breaks
- Makes a hard disk seem *fast*
- Your computer appears busy (even if you aren't!)
- Wears out moving parts



SEMIDISK Disk Emulator.

- Gets that job done NOW
- Makes a hard disk seem *slow*
- Maximizes your productivity with anything from databases to compilers
- Totally silent operation

...for YOUR demanding tasks.

SURPRISE! *Neither* is memory mapped, so they don't affect your precious Main Memory. *Both* retain data indefinitely - even with the computer turned off.

THE SEMIDISK SOLUTION. You could invest in a series of "upgrades" that turn out to be expensive band-aids without solving your real problem. Even those "Accelerator" and "Turbo" boards do little to speed up disk-bound computers. If your applications spend too much time reading and writing to disk (and whose don't?), you won't want to settle for anything less than a SemiDisk disk emulator. The SemiDisk comes in 512K and 2Mb capacity. More boards may be added to make up to an 8 Megabyte SemiDrive!

SPEED THAT'S COMPATIBLE. PC, XT or AT, if you need speed, the SemiDisk has it. How fast? Recent benchmarks show the SemiDisk is from 2 to 5 times faster than hard disks, and from 25% faster (writing) to several times faster (random reads) than VDISK and other RAMdisk software that gobble up your main memory.

MEMORY THAT'S STORAGE. Using our small external power supply, with battery backup, your data remains intact through your longest vacation or even a seven-hour power failure!

CELEBRATE WITH US! Now, SemiDisk celebrates its fifth birthday with a special offer for IBM-PC owners. Buy a SemiDisk now and we'll include an 8 MHz V-20 microprocessor (replaces the 8088) to make your new SemiDisk run even faster. Don't need the V-20? We'll take $20 off the price of your Battery Backup Unit!

	512K	2Mbyte
IBM, PC, XT, AT	**$495**	**$ 795**
Epson QX-10	**$495**	**$ 995**
S-100 SemiDisk II	**$795**	**$1295**
S-100 SemiDisk I	**$299**	**----------**
TRS-80 II, 12, 16	**$495**	**$ 995**
Battery Backup	**$130**	**$ 130**

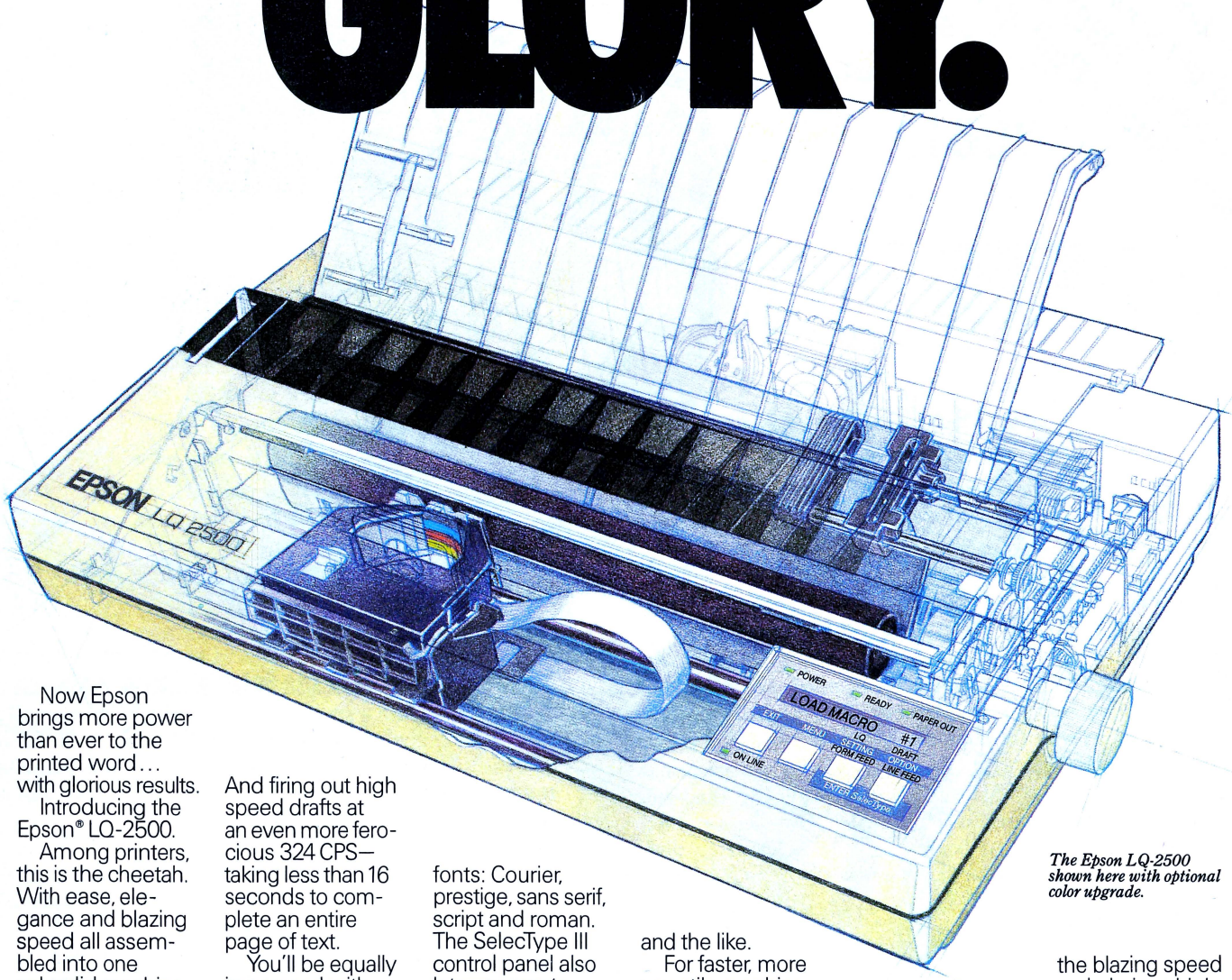
Someday you'll get a SemiDisk.
Until then, you'll just have to...wait.

SemiDisk

MasterCard VISA

SemiDisk Systems, Inc., 11080 S.W. Allen Blvd., Beaverton, Oregon 97005 (503) 626-3104

BLAZING GLORY.



The Epson LQ-2500 shown here with optional color upgrade.

Now Epson brings more power than ever to the printed word... with glorious results.

Introducing the Epson® LQ-2500.

Among printers, this is the cheetah. With ease, elegance and blazing speed all assembled into one splendid machine.

A machine that not only exceeds, but actually redefines today's standards in dot matrix technology.

At the heart of the LQ-2500 is a 24-pin print head that gives new meaning to the words "born to run." Producing high resolution letter quality documents at a print head speed of 108 characters per second.

And firing out high speed drafts at an even more ferocious 324 CPS—taking less than 16 seconds to complete an entire page of text.

You'll be equally impressed with how little time it takes to *operate* the LQ-2500—thanks to an advanced LCD control panel that eliminates the need for DIP switches, allowing you to command fourteen important printer functions at the mere touch of a button. Including print quality, pitch, margins, and your choice of five popular letter quality fonts: Courier, prestige, sans serif, script and roman. The SelecType III control panel also lets you create and store up to four combinations of printer set-ups for different applications.

Sophisticated paper-handling features—including automatic single sheet loading and a built-in push feed tractor—make the job easier, too. And an extra-wide 136 column carriage gives you plenty of room for spreadsheets and the like.

For faster, more versatile graphics, the LQ-2500 also comes equipped with bidirectional printing capabilities. For fast access to your computer while the printer is running, there's a built-in 8K buffer. And for brilliant color printing, an easy-to-install color upgrade. Naturally, the Epson LQ-2500 works with virtually all IBM® compatible hardware and software, and comes equipped with our one-year limited warranty.

To experience the blazing speed and glorious high quality output of the Epson LQ-2500 for yourself, visit your nearest Epson dealer.

For more information on Epson's full line of dot matrix, daisy wheel, ink jet and color printers, call (800) 421-5426. Or (213) 539-9140 in California.

Epson is a registered trademark of Epson Corporation. IBM is a registered trademark of International Business Machines Corporation.

EPSON

PRINTERS

Men, are you going bald?

In a major new study funded by Epson World, it has been discovered that overuse of poorly understood, high tech electronic apparatus is a leading cause of premature balding in men ages 30 and up. Preliminary data analysis indicates that the effect exists in nearly all age groups, spread across all social and economic strata throughout North America.

Before using Epson World

According to Professor Hermann Herkinspieler, Ph. D. (and Head Department Chairman of the Department of Redundancy Department for Statistical and Esoteric Studies Department at the Ethereal Campus of WMU), "This is the first time the strain of the high tech world has been linked to baldness." Professor Herk (for short) went on to say that the study was meticulously scientific. When funding first arrived, he formed a faculty interest group (FIG) which consisted of all members of the faculty who wanted funding for their pet projects. From this group he carefully made a random selection which was set up into a baldness interest group (BIG). A third (peripheral interest group, PIG) was also formed.

Knowing that competition is good for results, Professor Herk spiked the punch bowl at the New Year's Eve party with a concoction that normally causes complete baldness in two short days. With baldness a common problem, Herk reasoned that more intense, productive research would be forthcoming.

After using Epson World

We at Epson World had a feeling that our special imported South American inks used to increase our readers' computer literacy quotient might also have an impact on the baldness studies, so we sent complimentary copies to every member of PIG with instructions to keep EW within arm's reach at bedtime.

The results were astonishing! Unlike the members of BIG and FIG, the PIGs did not go bald. More importantly, they grew a lush, full head of hair with superior body. The implications of this totally scientific study are wide ranging and affect every male member of the human race: **If you want hair on your head, take Epson World to bed!**

You, too, can experience hair once again, or prevent shedding if you still have it. Simply check the expiration date on your mailing label below. If it is within a month or two of today's date, make any corrections necessary, and send it to us with your check, money order or plastic. With EW at your side, your hair will stay on your head, not in your hands.

SPECIAL ANNOUNCEMENT: Last month Epson World tried to give away our Bavarian Castle and a brand new Rolls Royce. Unfortunately, a freak avalanche caused by two Swiss yodelers wiped out the castle, so it won't be awarded. About the Rolls, after three tries without a single winner, Epson World has decided to not award the car. It is now used as our company vehicle, and our driver likes it better than either the Lamborgini or Ferrari we were using before. The mail run to the Post Office, a quarter of a mile away, takes longer with the Rolls, explaining the extra mail delay this last month.

Epson World Magazine
Box 369
New Boston, NH 03070

YES, YES, YES! Enter my one year subscription to EPSON WORLD, America's largest magazine devoted exclusively to the Epson community. I'll receive 12 issues for just $24.97, an amazing savings over our regular jacked up newsstand rate.

Bulk Rate
US Postage
PAID
Manchester, NH
Permit No. 1926

___$24.97 check enclosed
_____ MC _____ Visa
Card # _____
Exp. Date _____
Signature _____

Please mark any address changes on the label above. Canadian rates are $33.97(US); other foreign $48.00(US). These outrageous rates are necessary because of postage and hand stuffing of magazines into mailing envelopes required by the post office.